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PHYSICAL EDUCATION OF CHILDREN.*

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In considering the status of society as we find it to-day, our attention is arrested by the number of unstable, nervous, hypersensitive individuals we are brought into contact with. Especially in the boys and girls growing up we find restlessness, apparently due in part to an irritability of the nervous system; love of excitement; lack of self-restraint, and a degree of egotism which is so strong that educational influences are often insufficient to overcome, or even sensibly modify it. A little further investigation reveals the fact that in many of the families of these boys and girls there have been cases of nervous prostration, insanity or some form of disease of neurotic origin, and some of these forms of nervous disease show a tendency to become chronic, or organic.

A new type of child, we might say, has been developed, which has the so-called "neurasthenic temperament;" a temperament on which organic forms of mental disease may easily become grafted, under unfavorable conditions of the environment. Let these conditions exist up to puberty, and it is probable that insanity may already show itself. If it has not, latent mental tendencies are present, which will slowly undermine the self-control of the individual, and at some critical period, later in life, he will become the subject of some degree of mental impairment.

As those who have made the treatment of insanity a specialty are impressed by the congenital forms of mental disease occur-

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ring in early life, they are even more impressed by an organic and fatal form of mental disease, accompanied by paralysis, occurring in the adult. Seventy years ago this form of disease was so little prevalent that it had not been identified as a form of distinct disease. Thirty years ago in this country it was rare among men and almost wholly unknown among women, and is said to have been unknown among negroes before the war. During the last thirty years it has become more and more common, being now frequent among women, though much more frequent among men, and negroes are not exempt from it.

Of all forms of disease, treated in lunatic hospitals, it contributes the largest per cent. of deaths, being probably always fatal in its termination, though this point is sometimes disputed. A part of the increase in this particular form of cerebral disease may be no doubt accounted for by more close and accurate observation, which has tended to bring together groups of symptoms formerly widely separated, in this way broadening the classification. Making, however, due allowance for this fact, it is still true that there has been a steady increase in this disease.

The cause of insanity has been a subject of discussion for many years, and it has been customary to study lunatic hospital statistics for information in the matter. Several years ago I pursued the same method myself, analyzing 24,523 cases. I was surprised to find in the first place no cause assigned in 33⁸ per cent. Such a lack of knowledge of the causation of one-third of the cases, would of course seriously detract from any conclusions to be drawn from the remaining two-thirds.

In the second place I found only 2½ per cent. of the cases was supposed to be due to hereditary predisposition. Now while cases due to this cause alone are not common, no doubt heredity as a vital factor in the causation would be found in more than fifty per cent. of cases, and hence in these statistics heredity does not assume its due importance as a cause.

Again I found "ill health" assigned as a cause in 17½ per cent. The phrase ill health is of such broad significance that it may mean almost anything, but it is here used to include all kinds of bodily ailments which might act as causative agents, either directly or indirectly, in producing the mental disease. As insanity is a physical disease, and physical impairment or changes in nutrition are found in most cases, it would appear

probable that this small percentage does not approximate to the truth, and I think further discussion will confirm this opinion.

There are many other causes mentioned in hospital statistics, such as "alcoholism," "business anxiety," "domestic affliction," etc., which no doubt have been conspicuous factors in producing attacks of insanity, but the more carefully we study their relation to these attacks, the more apparent it becomes that they are only factors, not sole causes by themselves alone.

The whole fabric of lunatic hospital tables of causation has been built up out of statements and evidence furnished by the families, friends or acquaintances of patients, usually at the time the patients are admitted to the hospital. Often the physicians' certificates state the cause, but this is in most cases derived from the same sources. If we sift the evidence, we find first that it is furnished by persons largely ignorant of the nature of insanity; second, the most prominent condition of a probable causative nature nearest to the time of the attack is assigned as the sole cause; third, relatives and friends are often unwilling to assign a cause which may reflect unfavorably on the patient; fourth, hospital officials have no time nor opportunity to examine and verify, or reject the causes given. The more consideration we give to these tables, the more strongly convinced we become that they throw little light on the subject, in fact are positively misleading. Hence has arisen much misconception, and many theories have resulted as to the nature and cause of insanity which are superficial and narrow.

There are a good many things in this world which do not give satisfactory results if subjected to statistical analysis, and among these is the causation of insanity. Let the method of making the statistics be never so satisfactory, there will still be much that cannot be brought in the form of figures. Instead of being able to put our finger on one cause of insanity, and saying that alone is responsible for the attack, we discover that many influences have been at work, some of them perhaps for years, each contributing to a degree not to be determined its causal effect in producing the final attack. It is no one factor alone, but many that have combined. How then are we to tabulate a cause when there have been many together?

It is not many years since insanity was first called a physical disease, in contradistinction to the older theory that it was a

moral disease. This was a great advance in our conception of the true nature of insanity, as no doubt there is physical disturbance or impairment in all cases. It had the bad effect, however, of leading us to regard insanity as an entity among diseases, very much like pneumonia or typhoid fever, dependent on ascertainable causes and amenable to specific treatment.

Acting on the modern theory, hospitals for treatment, managed by medical men, have been established, and it cannot be denied that they so far provide the best means of treatment and care for the insane. These institutions are called hospitals, and they furnish medical treatment for the body; but that is after all a very small part of their work. Their inmates are called insane, not so much because they have a bodily disease, as because they have lost the power of self-control, and require help to restrain themselves. The restraining power of society is no longer sufficient to control them; they have been changed again into children, requiring something outside their own volition to make a continuance of life possible for them.

The lunatic hospital then is much more than a remedial institution. It really assumes toward the patient the attitude of parent, or guardian, and says: "I will take you and shield you from the world, letting no one harm you, and letting you harm no one. I will encourage your good tendencies, check your bad ones. Give you occupation in the form of diversion, and physical and mental work. I will improve the nutrition of your body, and try in every way to educate you and make it possible for you to again live in the society of your fellow men. You come to me as a sick and sorrowing child without will or strength; I will restore you, or let you die in quiet here."

Think how important and vital the function of an institution must be in its relations to society, which necessarily deprives man of what is of the greatest value to him--his personal liberty--and then endeavors by its care and treatment to reawaken in him the highest faculties of the mind, which are slumbering, or lost!

The existence of such institutions shows the imperativeness of the necessity; and the rapid increase in the number which they care for, shows how widespread the necessity has become. A recent census bulletin, published in May of the present year, states that the increase in the number of insane persons treated

in institutions in the nine years beginning in 1881 and ending in 1889, was 73.53 per cent., or to give the exact figures, 56,205 were treated in 1881, and 97,535 in 1889.

These statistics, it should be said, do not show the increase in insanity in the general population, but merely the number under treatment in institutions.

The large number of inmates of lunatic hospitals represents something much more serious than the tables of causation of insanity would indicate. On a very superficial examination we find that two-thirds of these inmates are in a condition which is incurable. The disease is so deep-rooted and organic that henceforth they will be simply a burden on the community, and drag along for years an existence of no service to anyone. On the contrary, they will be only a source of sorrow and suffering to their friends, and a tremendous financial drain.

When we consider the subject of idiocy we find the conditions still more serious. The increase in the number of idiots is very steady, and we are just beginning to realize the necessity of provision for them, which has so far been very inadequate. In 1880 the census reported 76,895 idiots, as found in the general population, but of these only 9,725 were in all kinds of institutions. Dr. W. E. Fernald, superintendent of the Massachusetts School for the Feeble-minded, writes me that the number in institutions has at least doubled in ten years.

When we visit an idiot asylum and make inquiries as to the care and history of their inmates, and examine the idiots themselves, we find food for very grave reflections. Here are human beings, in some cases, capable of considerable education, which will make it possible for them to eat, walk, clothe themselves, talk a little, work a little, play a little; but of what use are they to society? Of none whatever as a general rule. Do the very best you can with them—and splendid work is being done—and yet they can never contribute to the work of the world. They are little more than brutes, poor creatures! with dim glimmerings of reason, or consciousness. Their senses may to some extent respond when roused into activity from without, but they are dead to great thoughts and noble purposes.

The lower organs and functions of the body in the idiot share in the degeneration, which is at first glance most noticeable of the highest, the brain. Dr. G. Langdon Down, the great

English authority on idiocy, says: "There is scarcely an organ which is not gravely altered in idiots; the circulation and respiration are abnormal; the skin exhibits perturbed functions; defective innervation, lesions of mobility and nutrition are abundantly met with; the bodily conformation is of an aberrant kind," &c.

The life of the idiot is scarcely more than vegetative, unless by the most painstaking education it may have been developed into something more animal. It is a struggle for existence, which nature intends shall end in defeat and death. Man is often able by his little acts and expedients to interfere and arrest the downward progress, but it is a hand to hand fight, in which he is usually worsted in the end.

As the amœba represents the beginning of life, the earliest form of existence, the idiot represents the end, the final stage before extinction. While countless centuries of evolution have intervened between the beginning of life and man at his best, the descent to idiocy is more sudden, more abrupt. It constitutes, as it were, the fall of man from his highest to his lowest estate; from man a little lower than the angels, to man little higher than the beasts. It is none the less the end, however, than the amœba was the beginning. This fall to idiocy, which, essentially physical in its character, is attended by such profound mental changes, probably is not so rapid in its development as at first sight appears, and insanity, which in many cases is a factor in the descent, is also of slow growth.

It is not then, as already said above, to such superficial causes as "domestic affliction," "business anxiety," "ill-health," &c., that we are to solely attribute the insanity. As certain tendencies, transmitted or acquired characteristics, accidental variations, use, or disuse and other influences have slowly evolved man, so precisely similar influences acting in new ways, for long periods of years, have led to a degenerative type of man, sure to become insane, idiotic, or extinct under certain combinations of circumstances. Can it be doubted that this combination of circumstances is often present in the life of to-day?

The body itself and its environment are not mutually adapted to each other. Man was undoubtedly at some period of his existence a perfectly endowed animal, each organ acting

harmoniously with all the others, and all perfectly adjusted to the outer world. As long as the equilibrium was maintained, he continued essentially healthy, and insanity and idiocy were unknown; but when the intellectual and moral side became responsive, the brain had a strain thrown upon it out of due proportion to its power of resistance. Could the consequences have been foreseen it is imaginable that steps might have been taken to so modify conditions as to avert them. But that was hardly possible, as effects depending on natural laws are generally reached before we are led to investigate their causes.

In any form of animal life, the type best adapted to the environment would have been preserved, as it would have been a mere struggle for existence. With man it was vastly different, because he was modifying the environment itself, and not leaving his organism to be reacted upon by purely natural laws. He struggled for the existence of principles, for ideas, for society, and in so doing created an artificial life, to which the diseases of modern times have taught us he could often not adapt himself.

Had the survival of the fittest been the principle on which society has been built up, and not the survival of all, there is no question that the type of man to-day would represent something much stronger physically, and insanity and idiocy would be rare diseases. But such a principle of life would be only animal after all, and the highest attributes of society would be missing.

Unlike nature, society has preserved everything, both good and bad. This is the highest form of humanity, but it must produce its effect on the physical type. Our jails, our almshouses, our lunatic hospitals, our idiot asylums, do an immense amount of good from a humanitarian point of view; but they preserve and foster the weaknesses and defects, mental, moral and physical, of mankind, and are of course tremendously instrumental in perpetuating such weaknesses and defects.

Such a result is inevitable. The weak and the bad are to be cared for, and not destroyed. They are an incident to the evolution of something better, and in time the unfavorable tendencies which they keep alive and transmit will be modified or overcome, but they are a most important factor. The harm which they may do to society is not sufficiently understood or guarded against. If, for instance, marriages among the

defective classes were only allowed under conditions strictly favorable, it is probable that in time crime, idiocy and insanity would show a decided decrease.

Perhaps it will be said I lose sight of what has already been accomplished in the way of lessening disease and crime, by the institution method of care, treatment and reformation. I therefore hasten to say that I am confident that such a method helps to do away with the evils mentioned, and especially holds them in check. Thereby much indirect good is done, especially from a moral point of view. The world is morally better and healthier, and principles exert a stronger influence than ever.

What I especially wish to bring out in what I have written above is the amount of physical degeneration, which is a vital factor in what appears at first to be only mental or moral defect. Among the so-called "defective classes" this degeneration has become apparent more and more each year, and is now beginning to be studied with some care, but our methods of provision for these classes have until recently overlooked the importance of thorough physical treatment and care. The moral side has received a vast amount of attention, but the body itself, the mechanism, which must be sound if its mental and moral manifestations are to be natural, has received little scientific consideration.

In the general community, strange as it may seem, we have largely ignored the study of the physical side of education, until within the last twenty years. Special diseases have received a vast amount of consideration, but how to preserve a sound body outside of a sound mind has received little. We have often heard of a sound mind in a sound body, and have thought if we could keep the mind strong by cultivation and development, the body would take care of itself. In some way the greater, the sound mind, seemed to include the less, the sound body. We reasoned that if we could keep the main-spring of the watch in order, the larger wheels, the crystal, the hands, the case would need no further care. We failed to see, as long as the main-spring worked, that it could do nothing by itself. It went well, to be sure, when oiled and free from dust. But when one hand broke we experienced difficulty in telling time. Then we thought only a little superficial repair was necessary, and for a time all went well again. After a

while one of the larger wheels got out of order and the watch ceased to work. Again we thought only a little oiling and gearing of the main-spring was necessary. But this time it did not work, for there was a lack of adjustment. Thus thousands of watches got out of order, and many were ruined, yet all the time we were still trying to repair the main-spring only, sometimes succeeding, often failing, and refusing to learn the lesson of experience. It was not until many watches refused to work, and the supply threatened to give out, that we were led to think that something more than the main-spring must be out of order, and began to carefully examine each watch by itself to find the individual defect. Then we were surprised to find how many little imperfections there were in all parts of the watch which were responsible for its irregular action. One or two little imperfections would not materially affect its working, though each produced some effect. But several of these small imperfections, or one in a large wheel, would impede or prevent the movement of the main-spring itself. In some such way we blundered along in our study of the action of the brain and nervous system.

The body is not a mechanical device like a watch, but a plastic organism, as John Fiske has said, like a flower, of slow growth, and slowly adapting itself to its environment; but after all, the simile of the watch helps to make clear my meaning.

One thing after another has led me up to the conviction that there is a basis of physical degeneracy at the bottom of the mental impairment and neurotic tendencies now so frequent. If such is the case it must be overcome, not by treating the overlying and most conspicuous symptoms, but by attacking the cause. If there is physical degeneracy, then our efforts must be directed toward some means of bringing about physical improvement.

It is to me a most gratifying and significant fact, that physical education has within a few years taken such a vigorous step forward, that in the end it may accomplish this very result. It is too much to assume that the physical deterioration of the race, as illustrated in our defective and dependent classes, had any important influence in starting the movement in any direct or noticeable manner. Like other important movements, it probably came into existence from natural causes. The need

existed, society wanted it, and it came perhaps as naturally as rain from heaven. Everything undoubtedly exerted its unconscious individual influence at some point, bringing about the much needed result. And what has actually happened within ten years?

In answer it may be said that scores of gymnasiums have been started all over the country. The so-called "American," German and Swedish systems of gymnastics are taught at numerous winter and summer schools, which before were hardly known. In Boston there is an admirable normal school of gymnastics with a fine library, founded by Mrs. Heminway, and there are also several other good schools of physical training there, notably those of Dr. Sargent and Baron Posse. Physical training is taught at many schools, both public and private, throughout the country. Many colleges have courses, and their gymnastics are required under scientific supervision. Boston has a scientific medical director of physical training in its public schools. There is a large and flourishing national association for the advancement of the science of physical training. All this and much more might be said in answer to this question, but it demonstrates how active the interest in physical training or education is at the present time.

Up to within the last ten years almost, it may be said, the interest in gymnastics was in the direction of athletics, or for developing individual strength, by means of which young men might win in competitive sports. This awakened interest in athletics was only the forerunner of what was later to lead to scientific physical training, or true physical education. In such a system of education, athletics have their appropriate place, but they are not its end and aim. Few are fitted to train for athletic competitions; everyone should receive a physical education.

When we look back now, we can see how many influences were at work which would build up a physical educational system, when its need should become imperative. Almost at the beginning of the century, for instance, Ling was at work in Sweden expounding a theory of physical training, so in advance of the time that it would not be understood in this country for nearly a hundred years. The practical part of his work was soon to be put into operation in a limited way in Stockholm,

but that too has steadily grown in its completeness and application from year to year. But in this country the ground was not ready for the seed even, we might say, until within the last ten years. During these years, however, the seed has been sown, and very rapid progress has been made. It must necessarily be long before it will attain the thoroughness characteristic of it in Sweden, but it will come in time.

Another important influence at work to accomplish the same result has been, and is, the kindergarten system of education as originated by Froebel. A great observer of children, he was led to see how everything in their lives was at first physical. The most spiritual and refined of teachers in his ideas about children, he could not overlook the prominence of this side of the child. A writer has said*: "But there is a third aspect of the kindergarten system which * * * is the one to which Froebel gives the greatest prominence; it is the physical development of children. True to his central idea of the continuity of the universe, and of all its different parts, he cannot separate the human body from the mind and soul of which it is the outward expression. The three are closely bound up together, and must be treated accordingly. But in the beginning of life the intellectual and spiritual natures exist only in the germ, and the physical nature with its instincts and necessities plays the prominent part. If, then, education is to act as a guide to natural development, and not as a hindrance, it must take this fact into account, and during the first years of life devote itself chiefly to calling out and cultivating the limbs and senses which are intended as organs of the mind and spirit, so that when the latter begin to act they may have fit instruments to work with. This is the principle underlying all the 'play' which enters into the kindergarten system, and which is so planned that, while it develops all the different parts of the body in a healthy and pleasurable manner, it serves also by various means, such as rhythmical movement, dramatic representation, accompanying song and narrative, to awaken the higher senses and faculties."

These outlined principles of Froebel's system are certainly correct, and broad enough to cover everything, but they have so far received much too limited consideration for several reasons:

* The Child and Child-nature. Baroness Bülow. Translator's Preface, p. IX.

First—There has been up to what we may call the present time, no sufficiently strong demand for the application of such a system. The old-fashioned methods of the more purely intellectual education were sufficient. Children were sent to school to learn what they could out of books, and thus acquire a stock of "book-learning." Their bodies and their special senses were supposed to be already educated, and thus they were all ready to assimilate whatever might be taught. Parents, it may be said, or the public if we choose to use a broader expression, asked for no better kind of training. It was all they or their grandparents had had and should be enough for their children.

Secondly—It was the case that educators themselves were ignorant of how much more there was to education than information from books. No demand was made on them for anything better; they in turn had received nothing more, and they did not realize that there was anything further possible.

Thirdly—It may be said that the cause of physical training has always been retarded, even since we have had more clear ideas of its significance and value, by the death of properly qualified exponents. There were sporadic teachers of peculiar systems of gymnastics; there were gymnasium "professors;" there were amateur and professional athletes. None of these however understood the science of physical training, theoretically and practically, and hence the physical training side of the kindergarten system could not be much developed. There was no practical way of putting theories into active operation, and thus testing them and adopting them if of benefit.

Now we can see how these objections are being removed. The need of physical education becomes more apparent each year. The old-fashioned method is not enough for the present generation of young boys and girls who are, as we have seen, inclined to nervous troubles. With new types of fauna and flora, new methods of cultivation are required. So with a new type of boy and girl. A child of delicately organized nervous fibre, prone to deterioration, with highly specialized senses, great personal freedom, comparatively little parental authority, is such a contrast to the child of a hundred years ago, as to be almost a new type. The environment is of course an almost equal contrast, but it is an environment calculated to throw an increased strain on this new kind of child.

The demand now is to preserve what there is of good in the child; to so fortify and strengthen him that he may be able to exist. We see his life in danger from the over-stimulation to which he is exposed. In the very multiplication of goods or pleasures lies a source of peril. He is surrounded by temptations, not to sin, morally, but to yield to self-gratification, to lead a life of ease and abandon the physical struggle for existence, which is less real because less apparent, and therefore liable to be lost sight of.

There certainly is now apparent a realization on the part of many educators of the different kind of training required for children. They see that the child must be strengthened physically if he is to attain to perfect growth, morally and mentally. They must do what they never have done before, study and train their children physically, if they are to develop the harmony of the child-nature as a whole. It is not now enough to blindly follow conventional standards of education. These must now be modified with boldness and decision to meet the needs of the new type of child. But physical education begins long before the age is reached to enter the kindergarten, and it is the mother who will be called on to apply this early education. It may be said that physical training begins in the home, and will be always continued there. It is not to be given up when the child goes to school; on the contrary the infantile kindergarten first, and the higher grade kindergarten afterward, is to continue this training, and to so widen and extend its scope that it shall develop the mind and character of the child, while strengthening and preserving its body.

In past generations, when life was more simple and regular, home discipline was more rigid, and however much harm it may have worked in individual cases—a question I do not attempt to discuss here—it exerted a distinct and powerful influence. Now I think the case is different. Parental authority is weakened. Parents themselves are less at home. Many interests take them away and make it less necessary to develop home interests. The child is also less at home. His outside amusements and occupations are multiplied. He finds so much to do outside that he cares less what he has to do at home. His character is considerably moulded by external surroundings. He feels a

great degree of personal freedom; he is little conscious of home restraints and parental authority. In consequence of these things, children and their parents are less dependent on each other than formerly. The child reverences and respects his parent less, and the parent studies and educates the child less.

It is an encouraging sign of the times that educators like Froebel have recognized the great importance of the early training, and have partially pointed out methods of applying this training. But the most difficult part of the problem—the actual applying of these methods—remains. How is a nervous mother, not over strong at best, with household, social and other duties occupying all her time, and exhausting such mental capacity as she may have, to give up much time and thought to the study of her children?

We find now and then mothers who are striving most laboriously, with highly sensitive, or over-wrought consciences, to do their whole duty by their children. They incessantly watch them day and night; try every experiment; adopt any suggestions. They are apt unfortunately to do too much, and may strengthen the very weaknesses in their children—perhaps a continuation of their heredity—which they are really anxious to remove.

These occasional sporadic instances should not be underestimated, for they are of significance; but the mother herself must be educated, and her mode of life changed before she can do her children justice. She has got to be physically trained herself, and to have a normal organization before she will realize that there is an alphabet of health. If she once learns this of her personal knowledge, she will never rest satisfied until she has taught it to her children. But to do this she will find that she requires more time, and this will lead to her giving up some of the duties which before seemed imperative, but which now must take a secondary place.

As the child is the father of the man, it may be some generations before we shall get this kind of mother, for it may be only the well trained child physically that will develop such a species. But it must be her early training which will exert the influence necessary to take the first step on the way toward physical regeneration.

The method of training begun in the home, must of course

be the foundation for the later training of the child. Not only the laws of ordinary bodily development must be understood and followed, but the laws of disease and transmitted defect as well. With a certain organization certain methods must be followed from the first. Inherited weaknesses must be counteracted, and at every point an effort made to maintain a condition of stable equilibrium.

The mother must study her child as an individual both from the physical and mental stand point; but as the former includes the latter, which depends upon it, the importance of the latter must not be exaggerated. She must begin in the earliest months of infancy to observe, train and mould the child. She must regard as an utter fallacy, the old theory that the mind does not begin to develop until the school age, and the character will take care of itself. She must on the contrary learn to feel that the character is permanently established before the school age. And she must further be made to remember that strong minds and healthy character grow out of well bodies. To learn how far physical training may be carried will be the most difficult and essential part of her work, and I venture to say from my own experience in physical training that the results will astonish her. Such a plan of home-training as I here allude to, but have not time to detail, will, I think, have a tendency to restore the close relations of parents and children which the progress of time and events has served to relax. While the austerity of parental authority will not be restored, there will be more constant association and mutual dependence. The home will then become the ideal heaven upon earth.

The best kind of kindergarten training will begin in the home, and the home training will continue in the kindergarten. And these methods of training will continue into all the higher education. That the amount of intellectual training which children receive now in the higher schools is out of proportion to what they have the physical capacity to assimilate, I have no doubt. An immense mass of what is taught children makes no impression, and much time is thus wasted. It is not that the aggregate mass is too large; it is the method of instruction, and the character of the mass. The same amount of knowledge of proper subjects, taught after proper physiological methods, could be easily acquired.

What a child can learn is a matter of the personal equation; no two children are precisely alike. All children are possessed of a definite nervous mechanism, through which their learning is acquired, and this mechanism is dependent for its activity on definite physical laws. It is plastic; it is immensely sensitive; it is easily upset, though capable of an infinite amount of work by right methods. It can be trained in almost any direction by forming habits which tend to become fixed. It inherits tendencies to bad habits, which show themselves in all sorts of strange and unexpected ways. It is probably subject to a law of rhythm of rest and activity, therefore to do its work it must have enough rest. It will allow of a protracted over-strain, then suddenly give way, perhaps never again to be restored to its former integrity.

To satisfy the conditions which will keep such a complicated mechanism as this, fit to do its work, now and in the future, is a task of no mean proportions, but not by any means a hopeless one if we once recognize its importance, and profiting by experience, follow such indications as have been given us.

In the first place we must not be too closely held down by traditions. To a certain extent, we may say we know what we want to teach the child, but we do not know very clearly how best to do it, and it is just here that psychology and physiology will be of great assistance.

Psychology tells us that "man is born with a tendency to do more things than he has ready-made arrangements for in his nerve centres. Most of the performances of other animals are automatic. But in him the number of them is so enormous that most of them must be the fruit of painful study."*

Here is an immense reserve force of nervous energy which can be made available to do the work of the nervous system if we only knew how to do it, and it can be so developed as to maintain the equilibrium and not destroy it.

Physiologists have long ago shown us that habit is a powerful factor in every process of development. So with the nervous system, habit is the means which must be used for its redemption and preservation. Carpenter (quoted by James) says: "Our nervous system grows to the modes in which it has been exercised." "Habit," says James, "simplifies the movements

* James' Psychology.

required to achieve a given result, makes them accurate and diminishes fatigue."*

The animal is healthy because by instinct every movement, every act, has grown out of fixed habits of an absolutely normal character. His acts, though limited in variety, are exactly adapted to his surroundings.

The idiot, if of a very low grade, may show as little variety in his acts as the animal, but everything is with him defective, or imperfect. He has no correct habit of action of any organ. His life is a series of vain, incoördinated movements, and he would quickly perish if he were not kept alive by others.

The brain and the rest of the nervous apparatus are so constructed that they are capable of receiving new impressions, which may become permanently organized through a large part of life. There is a centre in the brain for every movement of every muscle, and as the number of muscular movements is nearly innumerable, the centres are also. Though we have no absolute knowledge of mental phenomena as far as their physical basis is concerned, and probably never shall have for that matter, we know that mental action accompanies muscular movement, and is subject to the same law of habit.

To improve, develop and preserve the body the greatest variety of muscular movements is necessary. And these movements must be made in a definite way, on a constantly progressive and widening plan. One after another of these movements tends to become fixed and habitual. The greater the number of these movements, the more perfect their operation, other things being equal, the stronger the body will be, and the better adapted to maintain the struggle for life.

Habits of mental action, though infinitely more complex and difficult to understand, are controllable after and susceptible to external influences in somewhat the same manner. There is no limit to the number of thoughts or ideas, and they tend to become fixed and habitual as do muscular movements. But there is this difference between muscular movements and mental action—the latter is in the end dependent on the former. The mind tends to weaken with the body, and in the idiot—the physical wreck—the mind is nearly extinct. Therefore if you wish to preserve the health of the mind you must first be sure

* *The Principles of Psychology.* By William James. Op cit.

you have a healthy body. We have so far educated the mind far in advance of the body. Let us now study the needs of the latter, and see how we can harmonize the developments of the two.

I have shown in the first part of this paper that a considerable and increasing amount of physical deterioration makes itself apparent in the community of to-day. While its extent need not be regarded as alarming, it should lead us to seriously consider what it is occasioned by and how it may be lessened.

In discussing this question I have also shown that the usually assigned causes of insanity in lunatic hospital reports are incidents in the causation, and give us imperfect and inadequate information of the whole cause. The truth appears to be that insanity, idiocy, unstable nervous systems, and weak bodies in other directions, are the results of the conditions of the society in which we live. The strain resulting from these conditions is too excessive, and the body gives way at its weakest point—the nervous system.

As deterioration in the race founded on a physical basis is apparent, and has so far increased rather than lessened, some further remedy is necessary to arrest its progress, and this remedy I have attempted to show can be found in the application of a broad and scientific method of physical training or education.

MECHANICAL MASSAGE.*

BY B. D. EASTMAN, M. D.,

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The word *massage* denotes any process of conjoint motion and pressure applied to parts of the living body for remedial purposes. Massage implies some force from which the pressure-motion is derived, and involves the production of physiological consequences adapted to remedy defects arising from insufficient muscular action of the usual forms.

It requires only the most superficial observation of the movements of the living body to suggest how communicated motion, or more precisely motor-energy, may be made available as a true remedy. When one raises a weight, the act visible is but the outward manifestation of the actual process. The same motion could be imparted to the weight by mechanical means. But in the vital performance the gravitating force acts through the arm, the body and legs, to the feet resting on the ground. There has been set in action a series of muscular fibres, the cells of which have divided among themselves an amount of motor-energy sufficient to overcome the gravitation of the weight. The action of the muscles has caused displacement of the fluids in which they are bathed, and by which their power is supplied. Will power incited the muscles to action, and both muscles and nerves have undergone change of structure. The circulation has been quickened, more air has been respired, and more oxygen extracted therefrom by the blood. Such are the gross interior processes necessary to the manifestation of motor-energy. The source of this energy is the changes which occur in the ultimate cell structures of the nerves and muscles. Now, massage produces similar physical and nutritive changes in the cell structures, in the circulation and oxygenation of the blood, and in the general physical consequences arising therefrom. But it employs exterior physical impressions and expenditures, which dispense with nerve influence, but are nevertheless capable

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Washington, D. C., April 20, 1901.

of carrying forward the same interior processes to the standard of health.

Thus nature sets the example and teaches the lesson of massage in every healthy organism, which is but an arena for the never-ceasing spontaneous motions of respiration, of circulation, of digestion, and a multitude of lesser activities, which enure to the benefit of the physiological system. The primary effects of voluntary muscular action are interior and physiological. Only a portion of such action is expended on external objects. The remainder serves to strengthen and perfect the involuntary acts, and both converge to one point, which we call nutrition.

The processes of massage are similar to the motions which occur naturally and spontaneously in the vital organism of health, and have a similar purpose, viz., increased activity of the nutritive function, the source of all the powers of the organism. These processes, as applied by the hand or by suitable apparatus, constitute respectively manual and mechanical massage.

A class of cases comes under the care of every institution for the insane, in which there is great sluggishness in all the vital operations. The skin is clammy, the extremities cold, the circulation feeble, the breathing shallow, the digestion deranged, the bowels torpid, and the whole system clogged with effete matter. With this universal derangement of all the bodily functions, the mental powers are necessarily overwhelmed. The manifest indications in the treatment are to secure better circulation, especially in the veins and capillaries, to bring about better digestion and assimilation, to develop and properly distribute nervous energy, to bring into activity the dormant emunctories,—in short, to arouse and stimulate all the vital functions.

In considering how the desired results can best be accomplished the conclusion is speedily reached that drugs are inadequate. Something is needed which will give the system an impetus, which will rouse the whole vital machinery from this state of inertia. This profound depression is usually brought about by excessive strain upon the mental and bodily powers, together with insufficient nutrition, and one might be tempted to try the rest cure. But the inertia is already too profound, and the indications are for increased activity. The remedial measure which suggests itself to every one is physical exercise, which has already been shown to be nature's grand stimulus and

tonic, and necessary to any improvement in the nutritive function. But the difficulty is such patients are unable to exercise to the required extent. This measure, if pushed, utterly exhausts the already weakened vital powers and completes the wreck. What is wanted is some device by which the needed stimulus can be given without exhaustion. Hand massage and the Turkish bath are agencies of undoubted value in these cases, but they do not fully meet the requirements.

About four years ago I had under my care an invalid lady who needed something out of the ordinary lines of treatment, and for whom I looked up sanitariums, rest cures, massage, etc., and finally decided to try mechanical massage, as developed by Dr. Geo. H. Taylor of New York, and employed by him in a wide range of cases, such as dyspepsia, neuralgia, paralysis and paralytic contractions, rheumatism, visceral and splenic disorders, and many others too numerous to mention.

The result of Dr. Taylor's treatment was so satisfactory in this instance that I was led to consider its applicability to certain cases of insanity, especially that class to which I have referred. I determined to give the system a trial, procured apparatus, and established a treatment room in the asylum.

To this apparatus, the principles upon which it operates, and its adaptability to many patients usually found in asylums, I will briefly call your attention. I make no pretense of having exhaustively studied the history and development of mechanical massage, but shall simply set forth what I have found useful in my asylum work.

These mechanical methods are in no sense imitations of the manual. The two do not cover the same ground, but extend their remedial effects in different directions. So far from being substitutes for, they are helps to each other, and may both be employed in the remedial treatment of the same individuals, to comply with separate and distinctly differing indications. Mechanical massage, however, is the form particularly applicable to asylum work. The motions being given by machinery are uniform, untiring, and free from any element of personal opposition.

The principle upon which the apparatus in question operates is that of communicating rapid vibratory motions to various parts of the body. The general effect of this treatment is to increase the circulation, improve nutrition, equalize nerv-

ous force, increase the action of the liver, kidneys, and the whole digestive tract, by giving exercise without exhaustion;—in short, it most admirably fulfills the indications in those sluggish cases to which I have referred, and which it is so difficult to reach in the usual way. It is also well adapted to more acute and active forms of insanity.

The special machines which I deemed well suited to my purposes, and considered necessary to a fair trial of mechanical massage, and which I introduced at the Topeka Asylum, give six varieties of movement.

The simplest and most easily described of these is that for giving oscillatory vibration to the limbs. For the leg, the patient, sitting in an easy position, with the leg extended, places the foot in a receiver or holder, which simply connects the limb with a horizontal shaft. To this shaft is given a quick, short, oscillatory movement through an arc of about thirty degrees. When the shaft and foot are set in motion, the leg is caused slightly to turn on its axis. This motion extends to the hip joint and the muscles surrounding, together with all the soft parts of the leg, are set in vigorous but passive action. This effect depends upon the sudden change of motion, and upon compression produced by the slight but rapid twisting and untwisting of the longitudinal fibres of the limb.



FIG. 1.—Showing the manner in which the foot shaker is used.

For the arms the patient grasps a handle which has a movement similar to the foot shaker. The degree of oscillation is

increased or diminished by variations of the grasp, the rigid arm and firm grasp causing the motion to extend quite through the arm and to affect the chest.



FIG. 2.—Showing the method of grasping the hand shaker.

The next two forms of apparatus present some points of apparent resemblance to the manual process, inasmuch as it transmits combined pressure and motion, which is the more impressive feature of the hand massage. This similarity has served to confer upon the mechanical process the name of rubbing. It is not rubbing, however, in the proper sense of the term, for the action is not one of friction on the skin. The skin adheres to the clothing, and this in turn to the rubber, and the friction is entirely between the mechanical ingredients of the fleshy parts, its fibres, membranes, molecular and atomic constituents. It is to these that the motor energy of the process is transferred. The leg rubber and the arm rubber are essentially on the same plan, but arranged in size and position to operate on the legs and arms respectively. They consist of two soft, elastic pads, having a rapid alternating, reciprocal motion, with suitable arrangements for adjusting the pressure, and for applying the action to the whole length of the limb placed between these pads.

The arrangement which lends itself to the most extensive uses is the V shaped pad. This pad is made of two pieces of thick elastic rubber fastened to a shank, and presenting soft flexible ends in the shape of a letter V. By suitable mechanism

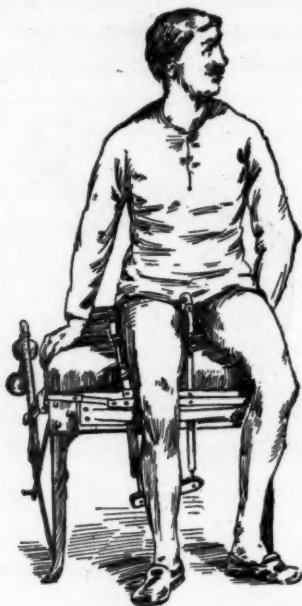


FIG. 3.—Illustrating the leg rubber. By moving backwards, the rubbers act upon the whole length of the leg. The lever at left regulates the pressure by an adjustable weight. The close fitting dress shown in several of the illustrations is not necessary. It is entirely practicable for both sexes, in ordinary clothing, loosely worn, to use all the apparatus.

it is given a rapid perpendicular reciprocating motion, and is adjustable in height so that as the patient sits or stands it can be applied to any part of the body from the head to the feet, and is especially serviceable when it is desired to act directly upon any part of the trunk. When it is desired to affect the spine the form of the pad allows it to act with great energy on each side of the spinal column, while the spinous processes between the diverging pads entirely escape its action. The deep muscles of this region become profoundly affected by its action.

The immediate effect of the application of mechanical massage by any of these essentially similar methods, is the development of heat. A pleasureable feeling of warmth pervades the part together with a sensation indicating increased circulation of the blood. Part of the heat is carried by the blood to the whole body, and the result is a sensation of buoyancy and



FIG. 4.—Method of using the arm rubber. The pressure is controlled through the lever either by the hand of patient or operator, or by an adjustable weight.



FIG. 5.—The V shaped pad as applied to the leg.

strength pervading the system. After a few treatments the constitutional effect is shown by a general improvement of the circulation and a deepening of the respiration by increase of appetite, and by greater activity of the kidneys and bowels—indeed the whole nutritive function is stimulated to increased

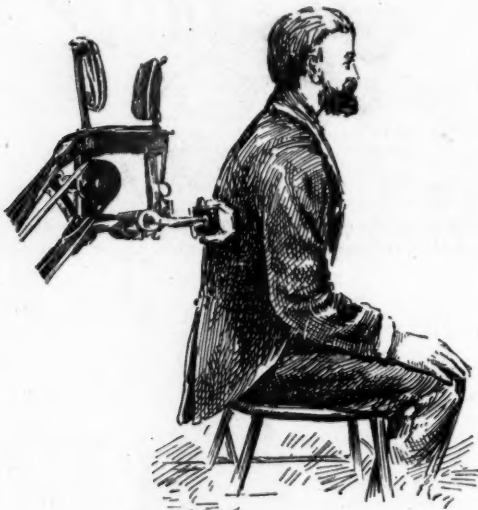


FIG. 6.—The V shaped pad as applied to the back.

energy. Congestions and hyperæmias are dissipated, and the proper balance of the circulation restored. This form of massage has a peculiar soothing action upon the nervous system. Sometimes even with the first application of the process restlessness and nervousness disappear, a tendency to sleep supervenes, and soon wakeful, fitful nights are transformed to quiet, restful ones.

Another apparatus called the abdominal kneader, takes somewhat varying forms, and is of great benefit especially in abdominal and pelvic derangements. This consists essentially of a low table or couch, the top adjustable as to height, and having a large central opening within which some form of kneading or percussing apparatus is made to operate upon the abdomen or side of the person lying thereon. This kneading

apparatus may consist of one or more balls slowly revolving in a perpendicular or in a horizontal plane, or of a pad with a slow to and fro motion. In the particular form which I selected, the apparatus gives a rapid percussing effect by means of two reciprocating pads much like large truss pads. This serves a most excellent purpose in stimulating the action of the liver, and in increasing peristaltic action.

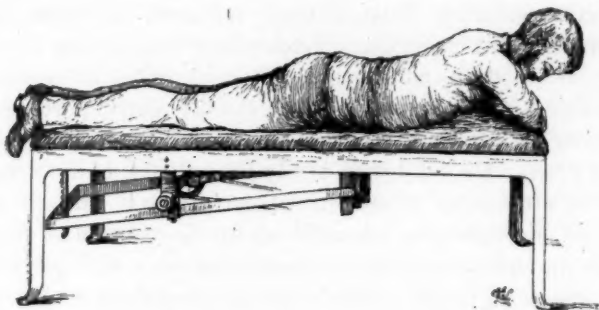


FIG. 7.—The abdominal kneader or percusser. The slow moving kneader is best fitted for use in the position indicated. The rapid percusser is better for acting upon the liver and spleen, as the patient lies more upon the side.

There are various other machines and methods in use by Dr. Taylor which I shall not attempt to describe. Those that have been mentioned are necessary to a fair trial of his methods, but good results could be obtained with a less number and others could be added as occasion suggests.

The ordinary method of using this treatment is to take each of these processes about ten minutes, alternating with equal periods of rest. This will occupy about two hours. All the apparatus is applied to the ordinary clothing, which should be loose to permit suitable freedom of motion. Its successful use requires patience and perseverance, and a careful study and proper appreciation of the principles upon which it is founded. It is a potent remedy, and must be used with discretion.

While I am naturally inclined to conservatism in regard to new methods, and by no means regard novelty as improvement, I am firmly convinced that mechanical massage will prove to be of great value in the treatment of a great many cases of chronic

disease which baffle ordinary treatment, notably dyspepsia, chronic nervous and rheumatic difficulties, paralytic troubles and contractions, the paralyses which sometimes follow acute disorders, visceral and splenic troubles, etc.

Like many other inventions, improvements and adaptations, the ideas underlying this form of treatment are not new. The Chinese have had a system of movement cure for more than three thousand years. The Brahmins have likewise practiced it for many centuries, though their methods are kept secret. The Swedish Movement Cure, from which has sprung the great variety of modern movements, physical culture, mechanical therapeutics, etc., was developed in the early part of this century by Peter Ling, the son of a Swedish curate, who was born in 1766. He was led to study the subject, and to develop and disseminate his ideas, by observing that an old gouty trouble of his right arm was relieved by the exercise of fencing. He took up and proceeded to master anatomy and physiology, and to invent and apply movements on physiological principles. These have been amplified, and are found to be a very valuable addition to our remedial agencies.

I have made use of this form of treatment for three years, finding it especially useful in the class of cases first mentioned, also in hypochondriacal cases, and those which required some external stimulus. I can heartily recommend it to those having under their care patients from the higher walks of life, and of sedentary habits, for whom it is difficult to provide suitable exercise.

I have made no especial tabulation of cases, but content myself with calling your attention, in this brief and inadequate paper, to the value of mechanical massage.

TEACHINGS OF RECENT INVESTIGATIONS INTO THE CAUSATION OF INSANITY.*

BY CHAS. E. ATWOOD, M. D.,
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The causes of insanity have always been of great popular interest, and are worthy of profound investigation. Until insanity came to be considered as a manifestation of actual physical disease, its ascribed causes were obscure and tinged with popular superstition and prejudice. In the sacred writings, it is recorded that evil spirits were supposed to occasion peculiar acts otherwise unexplainable; and though the Bible makes a distinction between the lunatic and the possessed, yet at the present day these terms are considered synonymous. In the poetry and writings of ancient Greece and Egypt mention is frequently made of mental derangement as an infliction of the gods; and similar views of diabolical possession or of divine origin prevailed until the time of Hippocrates, about 460 B. C. The writings of Hippocrates, and of Galen, 160 A. D., indicate a knowledge of the dependence of insanity on physical conditions, and also of the importance of heredity as a factor in transmission. But the good that they and others accomplished at that time was lost in the dark ages which followed, during which the insane were again supposed to be possessed of evil spirits, and thousands of them were executed as witches. Later, during the period of the revival of learning, causation was largely a matter of theory and metaphysical speculation. One set of writers considered that there could be only moral causes; another, that somatic causes alone were operative. As some good is likely to arise from any earnest controversy, so here there were concessions on either side as a result of experience, and the influence of both factors came to be acknowledged. Even at the present day, however, we occasionally see expressed some very absurd and erroneous ideas of causation. A late report of an American asylum for the

* Read at the Annual Meeting of the American Social Science Association, at Saratoga, N. Y., September, 1891.

insane mentions in a statistical table, such amusing instances as "biliary derangement" (twelve cases), "bloody flux," "egotism," "greediness," "laziness," "pain in the head," "women," "worms," and "want of mental capacity," as causes of the disease.

To ascertain the real operative causes in any given case is a difficult problem. The data obtainable are often insufficient; early symptoms may be mistaken for causes; we may be misled by false statements; we may undervalue the necessity of ascertaining causes; or we may not have the time or opportunity to devote to the subject.

As a fundamental proposition it has been stated, and, I think, with truth, that a person of average healthy constitution to begin with will not become insane from any of the ordinary vicissitudes of life; and, on the other hand, a person with inherited instability of nerve-structure may become insane from apparently slight causes. In other words, a majority of cases of insanity are due to two causes, hereditary predisposition on the one hand, and one or more exciting influences on the other. Hereditary predisposition is here taken in its broadest sense, and is meant not merely a tendency to insanity inherited from parents or grandparents, one or more of whom may have been insane; but also the inherently defective or unstable nervous organism which may be derived from ancestors who have suffered from allied nervous affections such as epilepsy, catalepsy, chorea, hysteria and hypochondriasis, or who have been addicted to vicious habits of living, or in whom there has been unfortunate consanguinity.

Statistics in reference to the importance of heredity are not entirely reliable, and are found to vary with different institutions where the insane are cared for. Of the 507 patients admitted to the Utica State Hospital last year, insane heredity was traced in over thirty-five per cent. The neurotic heredity would easily bring the percentage much higher, perhaps to seventy-five per cent. In 101 of the cases the causes could not be ascertained. The fact is, we have very imperfect data on which to base our ideas of the influence of heredity. The friends of the pauper and ignorant insane seem to know but little of their family history; while many of the better classes deny the existence of hereditary insanity in their families even when its existence is

apparent in the peculiar symptoms of the case, and perhaps in the very singularities of the relatives themselves. There seem to be some grounds for thinking that there is an insane diathesis, or strong tendency to insanity, fully as strong in some cases as the rheumatic diathesis or the inherited tendency to phthisis pulmonalis. This diathesis is sometimes recognizable, and when recognizable is of assistance in diagnosis in those cases where heredity is suspected, but denied by the friends. The symptoms of this inherited psychosis have been studied by Maudsley and others, and are found to "consist both in peculiarities of mental disposition and in peculiarities of bodily conformation." Close observation and study of such people have revealed the following conditions, one or several of which may be found in nearly every case: a peculiar shape or asymmetry of the head; a singular want of harmony in the features; a suspicious and distrustful look; a distinctly peculiar and uncertain manner; occasionally a stammering or otherwise defective speech, with the history of convulsions in early life followed later by habitual spasms of some of the facial muscles. With these bodily traits are associated certain peculiarities of mind. There may be an habitual extravagance of thought and feeling or an undue depression without explainable cause. In some there is an unreasonable disregard of social amenities or a habit of saying or doing proper things on improper occasions. In others may be noted, strange moodiness of temper; causeless fits of passion; extraordinary proneness to jealousy, distrustfulness and suspicion; an irresistible propensity to drink or indulge the sexual appetite; or an extraordinary degree of moral depravity. Without being able to call them actually insane, those relatives of insane people who present symptoms of a transmitted tendency to insanity, strongly marked, are often found "more suspicious and distrustful, more difficult to reason with, more impracticable" than even the patients themselves. Persons who present several of these diathetic peculiarities in a marked degree should be carefully guarded from those vicissitudes of life which are known to be especially active as exciting causes of insanity.

As regards the transmission of the tendency to insanity or the allied neuroses, heredity is more frequent on the mother's side, although the difference is not very great. It was found at the

Utica State Hospital last year, for example, that out of the 181 cases admitted during the year in whom insane heredity could be traced, fifty-two cases derived this predisposing cause from the paternal branch; sixty-seven from the maternal branch; fifteen from both the maternal and paternal branches; and forty-seven had insane relatives not immediately connected.

The potency of transmission is in proportion to the nearness of relationship. Though it has been noticed that there is occasionally a tendency to atavism in some cases, yet it is the rarest thing to find an entire intermediate generation free from *all* nervous disorder. If the grandmother, for illustration, was insane and the father and mother healthy, it will usually be found that an aunt or uncle is either insane, eccentric or noticeably neurotic. Again, a person with strong hereditary predisposition may remain sane all his life, if the circumstances of his education and environment are favorable, and his own nervous stability is not distinctly inferior to the normal. Further, heredity does not materially affect the curability of attacks of insanity, but it renders the patient more liable to relapses from slight exciting causes.

Among the other predisposing causes of insanity may be mentioned previous attacks; certain "constitutional" diseases which lower the general nervous tone, or effect decided alterations in nutrition; the influence of race, of faulty education, of certain occupations and of certain periods of life.

Race does not materially affect causation except in connection with emigration. The census of nativity of patients under treatment at the Utica State Hospital may be of some interest in this connection. On February 3, 1888, such a census was taken, and it was found that of a total of 593 patients, the number born in the United States of foreign parentage was 134 or 22.60 per cent., while 151 or 25.46 per cent. were born in foreign countries of foreign parents. Of these 151 insane patients of foreign parentage and foreign birth, 60.26 per cent. were Irish, 21.18 per cent. were German, and 8.60 per cent. English. I have also calculated the percentages of foreign nativity of insane patients admitted to the several New York State Hospitals during the fiscal year last past, and compared them with similar statistics in reference to the New York city asylums. Of the 1,942 patients admitted to

the State Hospitals alone, 50.14 per cent. had parents of foreign birth and 29.81 per cent. were foreign born themselves—12.87 per cent. being Irish, 8.34 per cent. German and 2.83 per cent. English. Of the 1,453 patients admitted to the New York city asylums alone, 78.32 per cent. had parents of foreign birth—67 per cent. were themselves foreign born; 28.01 per cent. being Irish, 18.30 per cent. German, 3.44 per cent. Russian and 2.82 per cent. English. .

Statistics gathered from various sources show that sex and the condition of marriage or celibacy do not exert a marked influence in predisposition. As regards age, no period of life enjoys immunity from mental disorder, but certain periods strongly favor its development. These are puberty, the climacteric (in women) and old age. Insanity occurring in early life almost always indicates hereditary taint. Such derangement in childhood is usually in the form of imbecility or mental enfeeblement, but may exist as one of the varieties of mania or melancholia. Whatever the form, it seems to limit further mental development. At the age of puberty there is a rapid and sudden acquisition of new powers and possibilities; at the menopause there is a rapid loss of function. Both periods are attended by danger where there is a neurotic heredity. In the girl, during adolescence, hysteria may develop; in the boy, at the same period, mental enfeeblement or mania tending to dementia. The climacteric is more dangerous to women, and is most often attended by melancholia. In old age a certain amount of deterioration of the mental powers always accompanies the usual physical decay, but if there are operative causes tending to produce insanity, the normal deterioration may be hastened or prematurely induced, or it may become a diseased condition resulting in dementia.

Mental diseases are most frequent between the ages of thirty and fifty, which is the period of highest maturity, but also of greatest mental strain. Referring to a table showing the ages at the time of admission of the 507 persons admitted to the Utica State Hospital during the year ending September 30, 1890, we find that there were 135 men and 108 women, or a total of about forty-eight per cent. between the ages of thirty and fifty.

The influence of faulty education in predisposing to insanity is considerable; but is found in the line of one-sided or imper-

fect development rather than in over-development of intellect. Sound development of the intellect forms a recognized safeguard against mental derangement, because it assists, in a measure, at least, in overcoming those powerful passions and emotions to which all are subject, but which seem to be most insupportable and destructive in those of least intellectual culture. Again, those who are obliged to live by hard manual labor are more apt to be attacked by this disease, strange as it may appear, than those who are engaged in the less exhausting mental occupations or who do not work at all.

The number of insane and idiotic persons in the United States in 1880, as estimated by Dr. Tuke, was, in round numbers, 170,000; or one to every 300 inhabitants. In England, the proportion was about the same, and in both countries it has been slowly increasing during the century. In New York State there is one insane or idiotic person to every 250 inhabitants. The constant increase in the number of insane is thought by some to be only apparent and that it is due to the general increase in population; especially by the influx of degenerate foreign elements, forming about two-thirds of the insane of the state; also to the more exact methods employed in statistics; to the fact that more are brought yearly under hospital care, and to the circumstance that all improvement in hospital matters tends to lengthen the period of life amongst the inmates, thus causing patients to accumulate. Acknowledging these things to be true, is it not reasonable to ascribe, in addition, a greater activity of certain factors of causation? The hereditary propagation of nervous disorders, inducing unstable nervous equilibrium, has been constantly increasing; the excitement of commercial, social, and political affairs, especially in cities, great and unabating; the constantly increasing departure from simple modes of life brings new emotions and more intense desires; the feverish pursuit of gain and pleasure and many demoralizing influences: all these elements have been continually at work, and all predispose to mental degeneracy.

We come now to the *exciting* causes which usually assist the predisposing causes in determining an attack; but some of which may produce insanity when there is no predisposition. Some of these exciting causes act directly on the cerebral centres and may be called direct causes; some are internal agents acting

through the nerves primarily, and on the brain as a secondary or sympathetic effect; and some are external agents known as moral causes.

Among the direct causes producing insanity, (some of which are important from the fact that the healthiest brain is unable to resist them,) may be mentioned injuries to the head. Severe blows or falls on the head may produce injury to the brain from *centre-coup* or concussion. Symptoms of mental disorder referable to this cause may come on shortly after the return to consciousness or after an interval of months or even years. Sunstroke and exposure to excessive heat are occasional causes. Sleeplessness is a condition favorable to the development of insanity, and is also a symptom of the disease early in its course. Sleeplessness is itself dependent on certain conditions, such as physical pain or suffering, undue activity of mind, anxiety, or prolonged mental strain. Organic brain diseases such as abscess, tumor, embolism, etc., produce more or less mental deterioration. Alteration in the blood supply to the brain is productive of mental disorder in various ways. A sudden loss of considerable blood in a young person, as in traumatic hemorrhage, may occasion melancholia with stupor. The anergic physical condition associated with great deterioration of the blood in severe anæmia may be accompanied by a similar mental state; while sluggish or defective circulation is more apt to be an effect than a cause. The peculiar mental states, supervening in certain general diseases, such as the delirium of certain specific fevers, the depression and irritability of Bright's disease, are probably induced by the circulation in the blood of some poisonous agent; but, as a rule, death ensues before such an agent is found to accumulate sufficiently to produce actual insanity. There is a substance, however, which, circulating in the blood, acts on the brain by direct contact, and secondarily by interference with nutrition, that forms a not unfrequent cause of mental derangement, and that is alcohol. The imtemperate use of liquor was a cause of the insanity of thirteen per cent. of the 270 male patients admitted to the Utica State Hospital last year, and of three per cent. of the 237 female patients admitted during the same time. Besides the poisonous action of the excessive use of alcoholics on the brain tissue and on general nutrition, they affect the moral tone and indirectly

lead to other damaging influences. Mental derangement from liquor is usually brought about by the habitual use of considerable quantities, though the effects produced and the amount and time required vary greatly with the individual. I have seen a typical case of frenzied melancholia produced by a small quantity of whiskey taken at one time by a person not accustomed to its use. We all know that delirium tremens may be a sequel of drink, and nearly all the forms of insanity may arise from the same cause. It is one of the causes of general paralysis, which is always fatal to life. One precaution ought to be taken, however, in considering intemperance as a factor in the etiology of insanity, and that is to ascertain whether it may not have been a possible early symptom instead of cause of the disease.

Some of the indirect causes of insanity were considered under the head of predisposing factors such as the influence of certain periods of life and of certain constitutional maladies. The other causes belonging to this category are pregnancy, childbirth and prolonged lactation. The ordinary dangers to which women are subjected in these physiological conditions are great enough, but those women who have an unstable nervous organism must meet one more peril—that of the possibility of mental derangement. Melancholia occurs most frequently in women predisposed to insanity during pregnancy and the period of lactation; while mania is more likely to follow childbirth or the puerperal state proper. Melancholia may follow childbirth if the patient is at the time in an enfeebled condition. Transitory insanity is also said to occur sometimes during the puerperal state, and may explain some cases of infanticide.

Uterine and ovarian diseases are occasional causes, but their influence is overestimated. Sexual excess and secret vices predispose in men to mental disorders, but they are more often a result than a cause of them.

We come now to the last division of our subject—the so-called moral causes. Among these causes are included domestic troubles, grief, anxieties, adverse circumstances, business perplexities, pecuniary difficulties, sudden fright, worry, and mental overwork. These factors are potent, largely in proportion to the amount of emotional excitement attending them. That this should be true is not difficult of explanation. It is thought that the normal processes utilized in intellectual effort

are simple processes; while emotions call into action more complex activities. Such being the case, it is easy to understand that excessive or unduly prolonged emotional excitement should be attended by a greater disturbance of the mental mechanism than would result from long continued intellection. Here again, however, more depends perhaps on the individual than on the circumstances.

There is no doubt that the surroundings, or physical environment, affect the development of the mind. But what has been called the vital environment has even a greater effect. By the vital environment is meant the moral atmosphere in which one lives. Many a mind is warped, stunted or diseased by the unfelt influences of unhealthy moral surroundings. Without further discussion of this part of our subject, about which much might be said, it is important to realize its great importance in reference to the production of hereditary predisposition to insanity and crime.

Any laborious occupation with close and vigorous attention to one line of ideas, may by its exhausting nature produce mental disorder. The reason more of our busiest intellectual men do not become insane is because they obtain recreation in variety of work. It is the long hours and intense application in one direction which results in mental strain and mental disorder in such cases. The prolonged process of preparation for competitive examinations in some of our schools is a fertile source of overwork, and might result in mental disorder.

The moral causes, such as grief, worry, fright and various troubles, which result in various stresses, are active in proportion to their severity and suddenness. In this respect the mind is comparable to a machine. If any delicate mechanism be started suddenly, and especially into very rapid activity, its component parts are likely to be injured. So too with respect to the organ of the mind. Sudden and great grief, sudden fright, sudden and great reverses of fortune are all attended by profound emotional disturbance, and in this way disorder the mental mechanism, and become sources of insanity.

It is not necessary to consider the origin of the various moral causes. Precarious circumstances, unhappiness in the family circle, etc., are sources of trouble, worry and anxiety, and may give rise to demoralization. Confinement, especially solitary confine-

ment, develops insanity—found mostly in prisons. Sudden change or relinquishment of habitual modes of employment, as in the aged retiring from business, has been known to produce melancholia.

The influence of religion depends largely on the amount of emotional excitement attending it, and is not a potent factor in causing insanity unless there be marked predisposition.

The subject of the causation of insanity is still imperfectly understood, and on an unscientific basis; but certain lessons may be drawn from our present knowledge. There should be a more thorough study of the subject to enable us to make intelligent efforts in the line of prevention. The general practitioner of medicine has the best opportunity to study the predisposing influences at work in the family and should be better informed on the subject of insanity by the teachings of the schools. Sufficient stress is not laid, in treatises on the subject, on the fact of the close relationship of the neuroses to insanity. The existence of these milder forms of nervous disorder in a member of a family with hereditary taint should signalize precautionary measures for the prevention of the graver disease; while actual cases of insanity should be placed under immediate treatment, for early treatment yields a much higher percentage of recoveries.

The evil effects of prolonged emotional excitement have been noted. The remedy is not easily applied. Variety both in mental and physical work is necessary to prevent overstrain.

The subject of immigration is one of too great importance to be passed upon in a paper of these limits. But the fact that two-thirds of the insane of the state of New York are either foreign born or of foreign parentage, would seem to indicate that something more might be done in that direction towards prevention.

It is a recognized fact that attacks of mental derangement are dependent usually on several causes, some of which are inherent in the individual; others may be acting gradually for years perhaps without suspicion; and others are of short duration and sudden in their action. Insanity implies disorder of the highest nervous structures. If these structures are unstable as a result of bad heredity their derangement is producible by slight disturbances; while in cases in which

these structures are normally constituted, a violent disturbance is required to upset the equilibrium. While heredity is perhaps the most important factor in causation by producing the insane diathesis, "the natural tendency of the organism is to revert to the sound type." Attempts at the prevention of insanity will therefore be aided by nature, at least, to a certain extent. A good physical education prevents the development of diseased tendencies; sound mental discipline strengthens the powers of the mind; and the two together have a tendency to prevent the conjunction of circumstances known as exciting causes.

While the subject is receiving more and more attention each year, it is suggested that something further might be accomplished in preventing insanity by continued intelligent legislative action; by enlisting the secular press through our medical journals and books; by appropriate family and educational training; and by associated medical action. At present the most potent factor which is being constantly urged as a practical measure in prevention is the early treatment by appropriate means not only of insanity but of the allied nervous affections; and also the prevention of marriage of those hereditarily predisposed.

***DIETETICS IN THE TREATMENT AND CURE OF INSANITY.**

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Insanity is a symptom not only of mental aberration, but likewise of physical depletion and cerebral exhaustion. Especially is this true with regard to the various forms, shades, and degrees of melancholia and mania. We find in those suffering with mental depression oftentimes a direct lack of desire for food; while those laboring under a stress of mental exaltation are quite apt to neglect the inception of nourishment through inattention, rather than anorexia.

The first essential in the dietetic treatment of the unwilling insane for curative purposes, is the enforced administration of sufficient quantities of food to prevent too rapid waste throughout the individual system, and to promote recuperation from losses already sustained; and likewise to increase, if possible, the capitalized resources of the human form divine.

The second essential is the selection of such food as will most rapidly and surely promote the rebuilding of those portions of the human temple which have been disgruntled or shattered by the effects of disease.

The third essential in the dietetic treatment of the insane, is the administration of the selected food in such a manner as to avoid all unnecessary shocks; to promote, in fact, easy and rapid digestion, and to favor the speedy assimilation of digested food products by the tissues of the body.

In our experience, we have found that forced feeding may most readily be applied by the use of a soft rubber naso-stomach tube. This tube, as now used, was the invention of one of my former assistants, Dr. N. Emmons Paine, and is a modification, both in construction and use, of the soft rubber catheter of Nelaton. When this tube has been inserted through the nose, and passed on to the stomach, by a skilled physician or nurse, the food may be injected through it in required quantities by

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means of an ordinary rubber syringe. Those who continue the administration of food through the old-fashioned stomach tube, prefer, as a rule, I believe, that the patient shall be in a sitting posture when fed; but when using Dr. Paine's soft rubber naso-stomach tube it seems preferable to have the patient lying on his back. In this supine position, the patient is less able to voluntarily regurgitate his food than when he is allowed to sit up. This is an important clinical fact, because many patients who need forced feeding are apt to acquire the habit of regurgitating food when they are thus fed. This they can do less easily when in a supine position than when sitting upright.

Now in addition to the method of forced feeding, to which we have alluded, we may state that in feeding indifferent or unwilling insane patients it is always wise to begin by coaxing and persuading the sick person in the gentlest and most tactful manner to accept food voluntarily, rather than have it forced into his stomach. Many a reluctant patient will eat when properly and persistently coaxed by a skillful and judicious nurse.

In addition to the nurse's missionary work of coaxing and persuading a patient to eat, we should always offer the food after it has been prepared as attractively as possible, and served with dainty delicacy. The refined air and the scrupulous neatness of a restaurant kept by a Delmonico should be assumed in the wards of every hospital, even when a glass of milk only is being served to an insane patient.

We come, now, to a consideration of the varieties of food best adapted to those depletions and exhaustions which precede and accompany mental and nervous diseases. Fothergill claims, judging from a physiological standpoint, and with the assumption that the pabulum of the nervous system is a "phosphorized fat," that "fish with butter should form a conspicuous factor in the dietary" of those suffering with neurosial affections. Dr. Fothergill asserts, likewise, that "fish is rich in phosphorus;" and again, "phosphorized fat has to be furnished to the nervous system." Now if phosphorus in fish were an essential in the treatment of brain and nerve disorders, then, by a most natural and conclusive logic, fish should be eaten only after it has been partially decomposed—that is, after it has passed into a decidedly gamey condition. For in this condition, arrived at by some process of molecular change and of

chemical re-formation, the amount of phosphorus in fish is perceptibly increased; as may be demonstrated by a casual olfactory inspection. While some rather inert and mentally inactive people (notably Laplanders) eat fish after it becomes gamey, such a diet seems unlikely to become popular or fashionable among American lunatics. The benefits to be derived from phosphorized fish (fish phosphorized by the influences of heat and sunlight) are not yet appreciated; and that they ever will be is, in some minds, the source of harrowing doubts. It seems strange that fish should ever have attained an exalted reputation as a brain food. Fish is peculiarly devoid of fat. Consequently, we cannot find in fish diet alone that which Fothergill deems an essential for the support of the nervous system—namely, “phosphorized fat;” nor is it certain that fish and fat when mixed produced a desirable form of nourishment for the brain. Those nations whose component subjects subsist largely upon fish, even when mingled with fatty substances, do not develop great brain power or mental activity. Hence, we must look elsewhere for food which will promote healthful brain action, and likewise assist in recuperating the brain and mind from the exhaustions of disease.

In the crucible of organized nature, we may find a food that is almost universally appropriate for nervous invalids. It is a food that raised up a Romulus for the founding of Rome; it is a food upon which the Cæsars fed until they arrived at the meat-eating stage; it is a food upon which every babe is nourished until, impelled, very likely, by the doctrine of total depravity, it departs from the paths of healthful simplicity, and seeks to revel upon those pots of flesh for which Egypt became notorious in the history of the world. That food is milk; and whether it is taken from the paps of a willing wolf, or drawn from the sacred mounds of human motherhood, it is, when thus acquired, tempered by a judicious amount of animal heat. Dr. Clouston, in one of his annual reports, states that one of his nurses told him, as an observation, that when the old women in the Morningside asylum were freely supplied with heat and milk they rarely or never died.

The disrepute into which milk has sometimes fallen as an article of diet for either the sick or the well, has arisen from the fact, to a large extent, I believe, that it has often been

administered cold instead of warm. Coming from the ice-chest, or sipped from a glass filled with lumps of impure and death-dealing ice—and after being taken from the diseased cows—it has often been a dangerous diet for even the most healthy. When milk is taken cold it chills the weak stomach of the invalid; it curdles and forms indigestible lumps; and it ferments and brews putrescent gases in the intestines. But when pure milk—the “auriferous stream from lacteal dug” of healthy cows—(cows kept on healthy food and pure water), is brought to a blood heat, or heated a little hotter than blood, and then administered to the worn and exhausted victim of mental and nervous disease, it becomes a bewitching elixir of life; and from it may be gathered such forces of healthful longevity as make it a sturdy rival of those waters of eternal youth which are hidden somewhere beyond the reach of even an optimistic and energetic Ponce de Leon.

Milk contains fat, sugar, caseous matter, hydrochlorate of potash, acetate of potash and phosphate of potash. It also contains lactic acid, a trace of lactate of iron, and earthy phosphates. All these have been dissolved in just so much water that, when properly heated, they form the best and most appropriate of all nerve foods. By the addition of salt—nature’s best cathartic—the supposed dangers of constipation or “biliousness,” so-called, by the use of milk, are almost entirely eliminated.

Blood contains water, albumen, fibrin, fatty substances, chloride of sodium, sulphate of potash, carbonate of potash, hydrochlorate of potash, carbonate of lime and magnesia, phosphate of soda, of lime, of magnesia, etc.

Hence you may readily see, by a comparison of the constituents of milk and blood, that in the former may be found the natural means for rejuvenating the latter when it is worn by the effects of disease, or wasted by hard toil or over-use.

Hot milk may, with almost absolute safety, form the daily diet and the midnight hypnotic of the mental invalid. Should such a food prove too rich in some individual case, then the milk may be diluted with lime water, clysmic or seltzer waters. Should the proportion of cream in good milk seem too large, then it may be reduced by a process of skimming. Thus the amount of fat to be administered to a given patient may be

regulated, by experience, to meet the actual necessities of each individual case. You may also enrich milk by the addition of cream, when necessary, for the better nourishment of emaciated cases.

Cold milk not only chills the stomach of a weak invalid, producing indigestion, nausea, regurgitation, and accumulations of gas in the stomach and bowels, but this inflation of the intestines by gas produces pressure upon the portal circulation, and consequent localized congestions of the blood, and inequalities and hindrances of distribution of the vital fluid throughout the body. Hot milk, on the contrary, favors digestion and assimilation, and prevents, to a very large extent, the evils of cold milk to which we have referred.

Hot milk digests readily in about two hours, or less. An exhausted invalid should take food in moderate quantities, in order to avoid overtaxing the powers of a weakened stomach, and after each ingestion of food the organs of digestion should be allowed to do their work fully; after which a brief period of rest should be enjoyed. But this rest should not be long continued, for, if it is, then exhaustion of the patient, through interruption of the currents of nutrition, speedily follows. After many experiments, we have concluded that a weak insane person should be fed once every three hours, from six o'clock in the morning till nine o'clock at night, and if the patient is sleepless during the night, then the food may be continued every three or four hours throughout the entire night and day. With such food, administered in the manner suggested, we have noted a rapid recuperation, both physically and mentally, of many patients who upon an ordinary hospital diet would have speedily died. While a milk diet is being administered, the patient may, if he craves solid food, be treated two or three times a day to a slice of toasted stale bread of such variety as he may select—that is, either white bread or Graham bread, or rye bread.

In addition to milk, carefully prepared and moderately cooked beef-tea may be administered in conjunction with the milk as a healthful stimulant. After the patient has, by the use of a hot liquid diet, fleshed somewhat beyond his normal weight, then he may be allowed solid food, consisting largely of the various native and imported grains, together with vegetables and fruits,

and a very moderate supply of meats. As a rule, very nervous patients should avoid lean meats, as they stimulate and irritate without increasing the strength of those who, while in an exhausted and irritable condition, eat them.

With the grain foods there may be given an abundance of fresh butter or ripened cheese, or both. Butter and cheese are simply the concentrated products of milk, and they are, therefore, to be reckoned among the best articles of nutrition for the human body.

Raw or rare cooked eggs go well with milk; and fat bacon, or fat spring lamb, with baked potatoes, form excellent additions to the dietary in the permanent recovery of the convalescent insane.

After a long continued course of hot milk treatment, it will be observed that the patient, as a rule, has increased, and in some cases quite remarkably, in weight; and also the tone and elasticity of the mind are encouragingly improved. But this increase in avoirdupois consists largely of soft and unmuscular fat. The nervous system floats upon a new sea of phosphorized fat; while the mind, freed from the cares of disease, soars aloft to Elysian fields of happiness like the lark in the morning. The pains and discouragements of body and mind have passed away, but while in this delectable state, and before resuming the arduous duties of life, the patient must have a new supply, or a rejuvenation of muscle tissues. This final and desirable end may be attained by the substitution of grain foods and substantial vegetables for the liquid diet; or the liquids may be continued, and carefully selected solid foods may be added to them.

By such a primary or secondary, or combined course of dietetics, the nervous systems of mental invalids are "renewed like the eagle's," and also by the renewal of a moderate daily exercise, in conjunction with solid diet, the muscle tissues become strong again, and ready for active use in the customary walks of life.

Above all things, the quality of the food given to the insane should be of the best, and its preparation for consumption should be made the anxious care of a mother, the delicate tact of a sister, and the scientific skill of an accomplished *chef*. Those who prepare food for the use of human beings should be

earnest students of physiological effects, as well as adepts in the æsthetics of cookery. The attainment of desired results in the preparation and administration of food for and to both the sick and the well, is a lofty and growing ideal. Just here, by way of episode and conclusion, we may assert that mental and nervous invalids cannot properly be fed, and nursed, and physicked, for much less than five dollars per week; and yet there are those who, in the innocence of blissful ignorance, believe that such an end may be attained by the expenditure of \$2.50 per week on each helpless unfortunate, or protracted case of lunacy.

The first requisite in State care for the insane, is a properly trained nurse. Such a nurse will cost the hospital, if she is decently paid for her services, and decently fed and cared for, at least thirteen dollars per week—this means eight dollars per week for salary, and five dollars per week for board and washing, and comfortably furnished, warmed, and lighted room. A trained nurse may care for about ten patients. The income from ten patients at two dollars and fifty cents per week each, will be twenty-five dollars. Subtracting thirteen dollars from these twenty-five dollars—thirteen dollars for the nurse's wages and board—and we have twelve dollars left for the care of ten patients, or one dollar and twenty cents per week each. This sum is supposed to furnish nourishing and recuperating food; a comfortable bed and bedding; an abundance of water, hot and cold, for bathing and for washing clothes; soft, comfortable wearing apparel, of such texture as may delight the eye of the invalid, and keep from his body every unfavorable and unfriendly breath of chilling air. In addition to furnishing food and raiment, bed and bedding, clothes and washing, to each patient for one dollar and twenty cents per week, all broken ware and furniture, destroyed by those who are reckless or careless, must be replaced from this same pittance; and in addition to all these already mentioned drafts upon the resources of one dollar and twenty cents, the patient must be supplied with light, and heat, and amusement, and occupation, and Christian consolation in the hour of deep despair. All these things may be and must be furnished, in the opinion of the philosopher and philanthropist, for the sum of one dollar and twenty cents per week for each case. We admit that heat and milk, plain bedding and a cheap night-shirt, may possibly be furnished for the sum named; but when

the time for solid food arrives, and for neat, substantial clothes, such as would seem appropriate for a Christian's back when he appears in public, then there must be either manna and wool from Heaven, or else the incurrence, by the hospital authorities, of a deep, deplorable, and damnable debt.

I believe that the American Association of Medical Superintendents should declare itself in favor of a generous and effective dietary for the insane, even though it costs much money. This dietary should be of the best quality; it should be prepared and administered upon scientific principles; and it should be bestowed in the most intelligent and bountiful manner. This diet should be administered by skilled nurses; and with diet and nursing should go such an array of garments as may satisfy and gratify the normal pride of the average human being.

When skilled nurses, and proper diet, and good clothing, and appropriate surroundings, and healthful amusements, are furnished by the State, in accordance with the tastes and necessities of each and every victim of insanity, without limitation of class or condition, then we shall have such a variety of State care for the insane as will redound to the credit of the various Commonwealths, and promote the recovery of the largest possible proportion of the insane. When this end shall have been accomplished in a rational and reasonable manner, then we shall not be obliged to blush with shame, on account of the inadequacy of our resources, whenever the subject of State care for the insane is mentioned.

MUSIC IN ITS RELATION TO THE MIND.*

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The important part played by the nervous system in all diseases to which human flesh is heir is so well recognized and appreciated as to make natural and equally important the attempt on the part of man, and especially the medical man, to reach and operate upon that nervous system for the relief and cure of disease. It is oftentimes through the medium of the senses alone that medical science attempts to produce its effects in brain and nervous diseases. Advantage is taken in therapeutics of the sense of taste, and with equal frequency that of touch is called into play in the healing art through the instrumentality of the skin, its rich nervous supply affording a ready means of access to the central system. It is only necessary to mention, in this connection, electricity in its manifold applications, and the salutary influence of heat and cold in sundry affections. Again, mental or nervous excitement may be provoked or calmed through the sense of smell by means of ethereal substances; and but a few years have elapsed since the public, fairly crazed with what seemed to be the greatest discovery of the age, sought self-medication by appealing to the sense of sight with the assistance of colored glass. It was then alleged, with some semblance of credibility, that even diseases of the brain could be cured by subjecting the patient to the healing influence of the sun's rays as transmitted through glass of various hues, and what was called, in high sounding phrase, "the photochromatic treatment of insanity" gained several fanatical followers.

It would seem, however, that the sense of hearing has not been appreciated by physicians, in the treatment of disease in due proportion to its availability as a factor in treatment, for the influence of sound upon the nervous system surely offers no barren field to the investigator in this direction.

* This paper was read before a popular audience at the Conservatory of Music, and subsequently read at the annual meeting of the Association of Medical Superintendents of American Institutions for the Insane, held at Niagara Falls, 1890. It is published here by request.

"Give me some Music,
Now, good Cæsario, but that piece of song,
That old and antique song we heard last night;
Methought it did relieve my passion much."

But susceptibility to auditory impressions as received and collated in the brain—in other words, susceptibility to the influence of music—varies greatly. It is well known that there are those who are hopelessly without taste for music, and who may never acquire it. In these cases there would seem to be a congenital defect in the brain centres devoted to music, if such there be.

"Speech," says Broussais, "is heard and repeated of all men who are not deprived of their auditory sense, because they are all endowed with cerebral organization fit to procure for them distinct ideas upon the subject. Music, when viewed as a mere noise, is also heard by everyone, but it furnishes ideas sufficiently clear to be reproduced, to those only whose individual frames are organized in a manner adapted to this kind of sensation."

In justice to those who are not keenly sensitive to musical impressions—I might almost say in self-defence—I mention these physiological facts in passing to refute the opinion, prevalent especially among musicians themselves, that the want of the musical faculty, or of the musical taste, is an evidence of mental or moral inferiority.

We are too apt to take it for granted that in all matters philosophical Shakspeare's *ipse dixit* constituted the last word, and perhaps the bard has done much to perpetuate this heresy about music by his lines:

"The man that hath not music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils;
The motions of his spirit are dull as night,
And his affections dark as Erebus—
Let no such man be trusted."

And Beattie's picture of such a man is yet more doleful:

"Is there a heart that music cannot melt?
Alas! how is that rugged heart forlorn;
Is there who ne'er those mystic transports felt
Of solitude and melancholy born!
He needs not now the muse; he is her scorn.
The sophist's rope of cobweb he shall twine,
Mope o'er the schoolman's page; or mourn,
And delve for life in mammon's dirty mine,
Sneak with the scoundrel fox, or grunt with glutton swine."

The ear may be perfect in every other respect and yet be deaf to certain notes, just as the eye may be perfect in every other way and yet be color blind.

There are ears that seem to have no defect in the general capacity of receiving sound or in the perception of musical tones, but are insensible to very acute sounds. This insensibility commences when the vibrations have attained a certain degree of rapidity beyond which all sounds are inaudible. Thus some persons cannot hear the chirp of the grasshopper; others the cry of the bat; and a case is on record in which the note of the sparrow was inaudible. I know a lady in Utica with whom, under ordinary circumstances, it is very difficult for me to carry on a conversation even at the top of my lungs, but let me talk to her while rattling over the cobblestone pavements of that city in a carriage, when the noise is so deafening sometimes as to make my voice almost inaudible to my own ears, and she hears without any difficulty.

As an analogous case I find recorded that of a shoemaker who had to strike continuously upon his stone while talking to his son, who was affected with deafness; and of a man—surely a very devoted husband—who had to keep a servant in the room beating a drum to enable his wife to hear his conversation.

We read in Boswell's *Life of Johnson* the following conversation as showing how insusceptible the great philosopher was to musical impressions:

“In the evening our gentleman farmer and two others entertained themselves and the company with a great number of tunes on the fiddle. Johnson desired to have ‘Let ambition fire thy mind’ played over again, and appeared to give a patient attention to it; though he owned to me that he was very insensible to the power of music. I (Boswell) told him that it affected me to such a degree as often to agitate my nerves painfully, producing in my mind alternate sensations of pathetic dejection, so that I was ready to shed tears; and of daring resolution, so that I was inclined to rush into the thickest part of the battle. Sir, said he (Johnson) I should never hear it, if it made me such a fool.”

With this comforting apology for those in my audience who, though they may not be very musical, are yet great men and great women, I proceed to speak of a few of the applications of music in every day life.

According to its quality music has an animating or lulling effect upon the invalid listener. It gives courage to the patient and fills the convalescent with joyous hope of speedy restoration, and all physicians can attest by actual experience the truth of the common observation that a sick man who sings is on the high road to recovery. More frequent still is the demonstration of music's spells in the nursery. Everybody knows—blessed knowledge too to those of us who have been married but a few years—how easily a crying babe may be quieted by a nurse's singing and lulled to sleep. Even a rhythmical tattoo with little sound will sometimes produce the desired effect. The mechanic's work becomes easier and the ploughman's less toilsome when performed to their own musical accompaniment. Neither can it be doubted that the peculiar music of sailors as they haul on the ropes of their vessel has its effect in lightening irksome labor. Our southern brethren will bear me out in the observation that negroes perform their appointed tasks with greater patience by reason of the inspiriting effect of their rollicking melodies. No festival can be properly celebrated without music, and the pleasures of the board are infinitely brightened by the strains of an orchestra or lively song. To dance without music is to rob the exercise of all its zest, and in this connection one has but to put one's fingers in one's ears and watch a ball in progress to convert the ball-room for the nonce into a scene of Bacchanalian revelry or the most disturbed ward of an insane asylum. In times of war as well as in the piping times of peace music exerts its helpful influence on the mind, and the soldier goes forth to battle oblivious of all danger and eager for the fray.

At the battle of Quebec, April, 1760, the Scotch troops were retiring in the greatest disorder when the musicians were ordered to strike up their favorite airs. The flight was at once arrested and the soldiers pressed on to battle. Every one knows how during the civil war courage was inspired by the military music of the contending forces. Certain simple melodies of the Swiss mountaineers, commonly played on the Alpine horn and known as the *ranz des vaches*, so strongly affected Swiss soldiers as to cause them to desert and flee to their homes. So frequent and disastrous became such desertion that the airs were forbidden in the army under pain of death.

It is well known too that by the sweet spell of music the pangs of death itself can be made to disappear. Franz Rocco, who, in the French war of 1806, was sentenced to death in Würtemberg, played gaily on a jewsharp as he strode to execution. It is related that when death had laid his finger on the sensitive, restless and highly poetic Chopin, and the composer was suffering violent pain, he summoned to his bedside his friend, the Countess Potocka, to assuage his death agony by her melodious voice. The heartbroken singer obeyed the master—the dying man came under her spell—he forgot his torment and fell asleep with a feeling of inmost gratitude to the wonderful soother.

Instances like the above might be multiplied indefinitely were I not afraid of becoming wearisome. But not only on man but upon the lower animals also does the power of music make itself felt. The camel in the desert and the horse on the field of battle go forth with greater courage and resolution to the music of drum and bugle. Lizards, serpents, elephants and other animals become tame under its magic influence. Prisoners tell of rats, mice, spiders, &c., whose friendship has been gained through music, and the legend of the Pied Piper of Hamelin is too well known to be recalled to this audience:

“ And, please your honors,” said he, “ I’m able,
By means of a secret charm to draw
All creatures living beneath the sun,
That creep or swim or fly or run,
After me so as you never saw!
And I chiefly use my charm
On creatures that do people harm,
The mole, the toad, the newt, the viper;
And people call me the Pied Piper.”

But the effect of music upon man varies much with the constitutional temperament and degree of culture possessed by the individual. As a general rule savage tribes, to whom, as has been well said, music is calomel and quinine and a whole pharmacopæia, enjoy a rude music that would drive us to despair. From Homer we learn of the love of the ancient Greeks for wild weird song. Of Peter the Great it is asserted that he could not tolerate French and Italian music, and a still worse taste was displayed by Louis XI.

As to the precise manner in which music produces its wonderful effects it is difficult and indeed impossible to determine. There are so many factors in an analysis of music that it is out of the question to ascribe a definite value to each in any such estimate. Whether it be the rhythm, the time, the melody, or the harmony or what not, or all combined, that accomplishes the object matters little, however. We know that rhythm must have a distinct utilitarian value in the work of the blacksmiths as, under the spreading chestnut tree or elsewhere, they ply their hammers in unison. Similarly, a college crew is soon made to realize the resources of rhythm, while it enters manifestly as an important factor in the old-fashioned threshing with hand flails. Again the time of a march often compels us to keep step with the music on nights of torchlight processions and campaign fanfaronnades.

Weber relates an amusing instance of the changeful effects of tempo as applied to manual labor. It appears that a London tailor noticed that his patriotic apprentices were fond of working to the slow time of "God save the Queen," very much to the detriment of his business. He therefore hit upon the crafty expedient of prescribing a livelier air, and at once observed the quickening effect of the music upon their needles. Not long ago I read in one of our papers that a boss carpenter somewhere hereabouts invariably asked would-be workers under him if they whistled as they plied the plane or saw. If they replied in the affirmative, he bade them whistle their favorite air, when, in the event of a preference on their part for a slow tune, it was "all up" with them, while "Yankee Doodle" furnished an immediate passport to the bench. We all know the effect upon us of such music as the "Dead March in Saul;" and modern funeral music, affording its luxury of woe in a hidden corner of the house, is often more thoroughly enjoyed by the mourners than the funeral sermon itself.

The effect of music varies much according to the medium used. While drum and bugle inspire courage, they may also give rise to sorrowful impressions. The celebrated æsthete Lemcke characterized musical instruments in the following manner: The flute is placid; the clarinet is sensuous; the hautboy is nervous; the violin resembles an emotional woman—it rejoices, sighs and weeps and makes its voice heard first, last and all the

time. Earnest, melancholy even woesome is the violoncello; it becomes funny when it attempts a jest and represents man. The bass viol is quiet and dignified in its deportment; indisposed to any kind of frivolity, its utterance is important, powerful under excitement and full of solemn threat in anger. It represents the type of mature age. The strains of the harmonica fill the heart with a nameless longing; and nothing produces more profound emotion than the now swelling now melting tones of the æolian harp with its weird unearthly effects. But king of all as regards its influence on the mind is the organ. It has a peculiar charm of its own whether in its softest or most thundering tones. Thus it happens that so many and such varied sensations may be evoked through its instrumentality—indeed, every emotion from the mildest to the most violent is susceptible of expression on the organ, and it stands unrivalled as an imitator of natural phenomena. It is related of the German organist Vogler that he was able to imitate so closely upon his instrument the effect of rain that the men in his audience instinctively put on their hats and the women spread their handkerchiefs over their bonnets; and so faithfully is he said to have produced upon his hearers the effect of thunder as to elicit on all sides the exclamation "*Gott wenn es nur nicht einschlägt!*" in intimation of a fear that lightning might strike the building. Remarkable as these performances were, it was reserved, I believe, for an American artist to so usurp the powers of electrical phenomena through the medium of his organ as to cause all the milk for miles around to turn sour.

The most powerful and most complete musical instrument is the human voice, so far as its effects upon one's fellow men are concerned. Nothing can so affect one's emotions as the immediate action of man's voice upon man, whether that influence be exerted by speech or song. There is something in the quality of the human voice itself that may rivet attention and enlist sympathy, or on the other hand be of a nature to distract and repel. How frequently indeed does it happen that even the lower animals will heed the voice of one man and be driven forth by another. How often too does it come to pass that the voice makes ample atonement for the poverty of a discourse, while on the other hand the most brilliant lecturer often fails to gain a hold upon an audience if his delivery be in quality totally

disproportionate to the wealth of his ideas. It is safe to infer that the famous preachers of the world were all pleasant talkers, and that the traditional old lady who brought home the solitary word "Mesopotamia" as the only registered fact in memory after what she termed a "b-e-a-u-t-i-f-u-l" sermon, had been inveigled into the hopeless confusion of shadow with substance in her homely estimate of what constituted beauty in discourse by the mellifluous voice of her spiritual guide.

It follows then from all we have said that music must have a powerful effect upon the nervous system, and that asylums for the insane offer a natural sphere for its beneficial effects upon disease.

To the asylums of France is due the credit of having first introduced music as a regular feature in the course of treatment. At the hospital for the insane near Rouen, an attempt was made early in its history to organize a band of music and chorus, and so successful did it prove that the good example was followed by numerous other institutions, not only in France, but elsewhere on the Continent. In more recent times a distinguished French scientist has attempted a new application of the theory of the transformation of mechanical movement into psychological and psychical movement, with a view to employing music as a means of curing or alleviating diseases of body and mind. He attempts an ingenious scientific explanation of the general influence of music on the development and functional play of the moral and intellectual faculties, and on the physiological state of individuals. This general influence may be decomposed into specific influences, and the following results are arrived at: There is, first, a music which acts specially on the intelligence and on the motor nerves; secondly, a music which acts specially on the nerves of sensibility and on the sentiments; thirdly, a music which acts all at once on the motor nerves and on the sensory nerves, on the intelligence and on the sentiments—this in general being the action which most frequently occurs. This enthusiast goes to the extent, even, of believing that he has discovered, between the effects of music and the nutrition of the nervous system, such analogies that the laws which regulate the one and the other might be formulated in the same terms. Nay, further, we might establish a method in hygiene, in medicine and the moral sphere, of profiting by these specific influences,

above all in the treatment of mental nervous affections, making allowance, of course, for individual idiosyncrasies. In short, music is an agent at once psychical and therapeutical, capable of performing a considerable part in the phenomena of life, and the employment of which is susceptible of application according to precise rules based upon scientific principles.

Still higher ground has been taken in Sweden in an analysis of the music of the heart itself. Many a time have the sensitive chords of hearts attuned to sympathy vibrated beneath the touch of pity, and often made glad tempestuous music within the joyful breast. But all this belongs to the readers of poetry, and scarcely consists with cold scientific fact. And yet it is claimed that the heart has its own music, and a melomaniac, a man named Rhuders, a Swedish physician, claims to have harmonized the gentle conceits of poetry with the dull records of physiology. He has noted down in the language of "crotchets and quavers" the beatings of the palpitating heart of a woman in one of the hospitals of Upsal. The composition is said to resemble a somewhat irregular waltz, *à deux temps*, and, as the chronicler gravely remarks, it constitutes one of the most remarkable pathological curiosities of the day. It is suggested that this may lead in time to the initiation of a new system of drawing-room pathology, and ladies may have occasion some day to call a Thomas or a Strauss to note down in chords the sounds of their beating hearts, and enable them, swan-like, to fade in music.

And here I am forcibly reminded of the "Anatomist's Address to His Adored One," as having special bearing upon this heart music:

I list as thy heart and ascending aorta
 Their volumes of valvular harmony pour,
 And my soul from their muscular music has caught a
 New life 'midst its dead anatomical lore.

Oh, rare is the sound of thy ventricles' throb
 In a systolic symphony measured and slow,
 When the auricles answer with rhythmical sob,
 As they murmur a melody wondrously low.

Oh, sweet is thy voice as it sighingly swells
 'Neath the daintily quivering chordæ vocales,
 Or rings in clear tones through the echoing cells
 Of the Antrum, th'Ethmoid and Sinus frontales.

In America, some interesting experiments were conducted in one of New York City Lunatic Asylums, Randall's Island, eleven years ago, and the claim was made that several of the patients were greatly benefited. From the reports made at the time it appears that cantabile music had an effect similar to that which it exercises upon certain animals, the person being disposed to lie down and go to sleep under its influence. It does not appear, however, that this was anything more than a spasmodic attempt to introduce music into the institution as a systematic part of the moral treatment.

While my own enthusiasm as regards music does not exalt it into an agent *per se* of cure in disease, I believe it to be decidedly beneficial in a variety of cases. My attention was first called to the value of music as mind medicine at the Utica State Hospital by the persistent search on our premises by two villainous looking gentlemen from sunny Italy for such eleemosynary nickels as might fall from grated windows in substantial recognition of a musical reminder from a badly demoralized hand-organ of the better fate that was in store for our unfortunate patients in the "Sweet Bye-and-Bye." Maddened myself by the dismal screech of the instrument, I had the hardness of heart and temerity to drive the pestiferous players forth, and away they went in dudgeon, muttering Italian curses between their teeth. Later in the day one of the employés of the asylum chanced to see these men basking in the sun while munching their mid-day meal. He was recognized by the grimmer of the bandits, who at once arose, and opening a drawer in his hand-organ, displayed a large-sized revolver and a blood-thirsty knife. He eked out his broken English by violent gesture, and passing his lank fingers deftly across his throat, intimated with significant emphasis a lurking desire to shoot and behead the offending official who an hour ago had taken bread out of a hungry mouth, and declined with thanks to be told mechanically of the "land that is brighter than day." Full of alarm the employé aforesaid hastened to announce my impending assassination, and to afford me much-needed time to prepare for the "Father that lives over the way." I confess that the narration of the awesome incident somewhat alarmed me, and for some time thereafter I was on the alert by night and by day when out of doors. With the returning season of

Italian street opera, my two friends appeared once more. Then it was that I realized more than ever before how important a part discretion plays in valor, and how strong in my own case was that instinct which Dr. Bucke tells us shall not be accepted as a criterion of sanity. At once the hard-hearted despot of the previous season became

Generous as spring dews that bless the glad ground,
And courteous as monarch the morn he is crowned.

I insisted that the Italian artists should partake of the hospitalities of the house, and in the language of Cook's tourists' circulars, I "personally conducted" them. First they played in the exercising ground for disturbed women—when, by the bye, it became their turn to exhibit fear—and it was remarkable to witness the almost instantaneous effect of the simple music on the patients there assembled. These women became at once less boisterous, and were all evidently interested in and diverted by the impromptu entertainment. From this yard the distracting players entered some of the wards, and here again the salutary effect of music was made apparent, though it was amusing to see one of the men, evidently not realizing the precise character of the institution, pass round his hat from patient to patient in vain appeal for bounty. Largess was duly provided elsewhere, however; and I had thus demonstrated to my satisfaction, the fact that we possess in music a power over the insane that might be turned to good account by simple means, while, what to me personally was vastly more important, I had made my peace with a would-be assassin by the payment of a modest ransom. This was the beginning of a systematic use of music at the hospital, and soon led to the formation of an orchestra.

By advertising in the New York papers, and especially the great German daily, for musicians willing to act as attendants upon the insane, I was able to enroll an army of candidates, and pick out my men at a given *rendezvous* in the city. By this means it was not difficult to get together able-bodied young men, competent alike as attendants and members of an orchestra. The candidates had not been long enough in the country to become members of the union, and were glad to accept situations at ordinary rates of compensation. Attendants with musical ability were engaged in preference to others. One of

the first departures was to substitute for the bell in the courtyard clanging the announcement of meals and the hours for quitting and resuming work, the melodious bugle calls of the army. On evenings of entertainment, and especially when the regular weekly dance is given, the musicians do much to enliven the audience and dancers and non-dancers alike. Again, concerts are given in different wards during the week, and especially in those in which cases of acute melancholia are received and cared for.

In this class of cases music gives promise of having a distinct value. It would not be true to allege instances of wonderful cure by music alone, such as may be found scattered here and there through the literature of mental medicine. There is always ample room in treatment of any kind for the argument *post hoc ergo propter hoc*, and always a disposition to ignore the awkward question, Would the patient have recovered, thanks to the healing forces of nature, without your interference?

The interdependence of treatment and causation goes without saying in all diseases; and as it is difficult or impossible to assign a single factor as having produced a certain morbid result, because disease, and especially insanity, is usually due to a conspiracy of conditions, so likewise in treating that disorder credit must not be given in successful medication to one thing only, but to all the resources of our art combined that may have been brought to bear in a given case. Thus, it is impossible to measure the precise value of music in our armamentarium. It cannot be placed on a par with drugs in this respect, and one must be content to speak of its therapeutic value in mere general terms. It were as reasonable to expect a definite statement as to the value of theatrical entertainments, of dances, of athletic sports, of reading, of looking at pictures that please the eye, and of the thousand and one things that comprise what is generally known as moral treatment in hospitals for the insane, and which affect the body favorably through the mind and nervous system. We do know that for the moment attention is diverted from self to the orchestra, and that in so far morbid self-introspection can be checked. We know that through the nervous system the heart beats faster and the circulation is quickened, and that in so far the functions of the body are stimulated to greater activity. Similarly,

respiratory movement may be accelerated and the blood subjected to follow aëration. In these and other ways it may be claimed that music is helpful in the treatment of insanity, and one is inclined to bespeak for it greater consideration, as one of the readily available appurtenances of an asylum, than has heretofore been vouchsafed by the craft. Our own experience has been most gratifying in exciting interest and allaying irritation. The patients are evidently influenced for good in the majority of cases, and take an intelligent interest in the ward concerts provided for them. Inmates of other wards beg the privilege of going to the one in which the orchestra is performing, and many express gratitude for the relief that the music affords them.

Cases recorded in the literature of psychiatry are not few where the cure by music has bordered on the miraculous. In nearly all of them there is an undercurrent of sensationalism and a flavor of romance such as to suggest that the enthusiast has attained his end by fabricating facts where stern clinical reality failed to supply them in sufficient measure to suit his fancy. Ancient history furnishes a large share of these cases.

"And it came to pass when the evil spirit from God was upon Saul, that David took a harp and played with his hand; so Saul was refreshed and was well, and the evil spirit departed from him."

Of Pythagoras, who was the father of music as a mathematical science, it is related that he not only loved music, but had recourse to its powers to relieve mental strain in himself and his followers, as well as to encourage the reflective mood. Through music he induced in himself and his pupils the loftiest perceptions, curbed all froward passion and encouraged virtuous resolve. Indeed, he referred the origin of melody to the gambols of the spheres. "Next to theology," said the mirth-loving Luther, "I give the highest place to music, for thereby anger is forgotten; the devil, also melancholy and many tribulations and evil thoughts are driven away."

It is best to refrain from detailed reference here to the more or less apocryphal instances of relief afforded in the cases of such personages as Haroun al Raschid, Philip of Spain, the bandits sent to capture Alessandro Stradella, and the Hungarian count who was charmed into recovery by Mara. Certain it is,

that no such sensational cures have been brought about in our own hospital, and we are indisposed to magnify the effect of music *per se* as a curative agent. Yet our experience accords with that of other observers who would place music in that group of natural recreative forces which are active in every healthy life, and which operate against the morbid weakness of any part by increasing the vigor of the whole.

It is to be borne in mind that there is constantly occurring in the organism an appropriation of external impressions by the brain which goes on unconsciously. "As the various organs of the body," says Maudsley,* "obtain from the blood the material suitable to their nourishment and assimilate it, so the organ of the mind unconsciously appropriates, through the inlets of the senses, the influences of its surroundings." And thus the nature of the mind may be permanently affected by these unconscious processes. The varying manner in which music affects some persons, producing a lively feeling of immediate pleasure, calming mental agitation and exalting the mental tone, and thereby indirectly much affecting mental activity, is adduced by Maudsley as an excellent example of a marked effect upon the psychical tone by physical agency. Indeed, he goes further in his recognition of the corporeal nature of the process, holding that such sentiments as the love of wife and children are not so much definite emotions as a general tone of feeling resulting from certain relations in life, and that they represent a mental state in which ideas in harmony with a given tone of mind will be attended with a pleasant emotion and discordant ideas with a painful emotion, precisely as harmony in music produces pleasure [and discord pain. Resolved into simple terms, the proposition is this: the effect of music has much to do with the *tone* of mind engendered by it. And that the mental tone of an individual has much to do with his power of resistance when disease overtakes him, goes without saying. Faith-cures and other humbugs furnish ample evidence of this fact.

In briefly summarizing the results of experience in concluding this desultory compilation, I would say that we have in music an element of moral treatment that we cannot afford to neglect. It is within the reach of all hospitals for the insane to provide systematic musical entertainments for its patients. Some,

* The Physiology of Mind, p. 24.

despising the day of small things, may not think the swift hard precision of a mechanical piano, with its arrangements of music-hall songs, such as "Down Went McGinty," or an Indian brass band at Niagara Falls, is music. Yet the admiration for them is the same emotion as is evoked, though with more critical reservations, from the cultured at a Thomas concert. One can forgive the ear splitting music of the street when one sees as we have seen from these windows the marching and dancing of the children. Similarly, one can adapt the music of the hospital to the varying tastes and moods of those for whose benefit it is discoursed, and contribute, I am convinced, in no small degree to the well-being and recovery of our patients.

Music, all powerful o'er the human mind,
Can still each mental storm, each tumult calm,
Soothe anxious care on sleepless couch reclined
And e'en fierce anger's furious rage disarm.

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THE SEMINARY METHOD IN ASYLUM AND HOSPITAL WORK.*

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The purpose of this paper is to give an account of an attempt at the McLean Asylum to adapt what is known as "the Seminary method" to the systematic study of medical and psychological subjects in their relation to the care and treatment of the insane.

In 1889 a new laboratory was opened for pathological work and for experimental research in physiological-psychology, in the hope of ultimately adapting its methods to clinical and diagnostic uses. The object was to bring together with the experimental work in the laboratory the clinical work of the asylum wards, and studies in the literature of the subjects investigated. For the latter purpose, instead of the usual procedures of a medical society, a "Psychological Seminary" was organized by the medical officers of the asylum, including four physicians and three house-pupils,—seven in all; and meetings were held nearly every week on a stated evening. At the first meeting a paper was read by the writer describing the "Seminary Method," and the following extracts are taken from the records.

"The 'Seminary' is a term applied to an organized method of study of scientific and literary subjects. It is comparatively new in this country, but in recent years it has been extensively introduced in American universities. It was originally the contrivance of Von Ranke, in Germany, for training a school of professional historians. It is now generally recognized as the best device for accomplishing the results of original study in other lines of investigation. The 'Seminary' is itself a laboratory where the beginner may acquire methods, and where the advanced student may do work which shall contribute to the

*The first of these two articles was prepared for the occasion on which it was read; it was followed by a contribution to the discussion which has been extended, by request, to make the second article; and they are published together as pertaining to one subject.

*Read at the Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane, Washington, April 29, 1891.

sum of human knowledge. It may be employed wherever inductive logic is applicable; the study of psychology must proceed after the method of observation and induction,—by reasoning to general truths from many particulars. It is the natural method, by which the sciences have long been taught by laboratory study; and for the present purpose it is the application of the scientific method to the study of psychology. Our purpose is, therefore, not only the gaining of knowledge, but at the same time the adoption of a method of study, which includes the art of systematic and comprehensive investigation of all knowledge upon a given topic.

“The work of a seminary aims at being original; and in order to do original work upon any subject a survey must first be made of the literature of it as a basis from which to push investigations further.

“An essential part of the equipment for such work is a reference library. Hence the value of our special library even with its small collection of books; it is already capable of being very helpful toward giving us the bibliography, and the sum of present knowledge of the subjects we shall study.

“The ‘seminary method’ is coöperative and multiplies the capacity of the single investigator, giving each member the benefit of what all can contribute. It not only multiplies acquisition by the saving of time, but there is a special gain in interest, and clearness of the conclusions reached through the freedom of the inquiry and discussion peculiar to the method.

“There are two distinct lines of work:

“1st. The preparation of a large subject which shall teach the student to get speedily a grasp of many details in a limited time.

“2d. The preparation of a carefully wrought thesis on a smaller topic where the object shall be the most perfect work based on a knowledge of the whole literature.

“Upon the basis of a general subject, each student may take a special minor topic for investigation. In appropriate cases these minor studies may be presented in the Seminary in such an order as to trace a historical or a logical development of the main subject.

“At first we may take up subjects that come readiest to hand, in the lines of neurological and mental science. Later,

the special subjects may be chosen, in which all may join by the assignment of the minor topics to individuals. Thus several successive readings may be devoted to covering the field of such allied subjects as 'aphasia' and 'hallucinations.' Again we may take up the theory of 'specific energy of nerves;' or again the theory of 'the storage of nervous energy;' and that of the 'dissolution of the nervous system,' of Hughlings Jackson.

"The experiments begun here last year, by Dr. Noyes, in testing the knee-jerk phenomena in much demented persons, offer possibly the condition of eliminating, to a greater or less degree, the influence of the attention which has been found to introduce so much fallacy in all previous experiments of this kind. The direct relation also of the attention to reaction-time, and its weakening in nervous fatigue and exhaustion, in the sane and the insane is a subject of great clinical importance.

"Among the first subjects we shall take up, will be that of the physiology of bodily exercise. This will be an instructive study in its direct relation to the applied physiology of the work now going on in the training of our nurses in gymnastics, as a means of applying the principles of physical exercise to therapeutic uses for our patients.

"It will be found that this subject leads directly into the field of the physiology of the nervous system, and will come in touch with the very subjects that now most invite our attention as leading to new investigations.

"In fine, it may be said, that, at whatever point we may enter the field of investigation, we shall find that point to be a good centre from which to proceed along many lines of inquiry, all of which are so allied that light gained from one will aid in the elucidation of others. Moreover it cannot fail to come to pass that all our clinical work will gain increased interest to ourselves, and value to our patients, through our being better informed with the more precise knowledge of the vital principles with which we have to deal.

"To preserve the data of our Seminary work, and to give it dignity and efficient continuity, some formality will be maintained in the conduct of these meetings. A record will be kept of the proceedings, giving brief abstracts of the matters presented,—the argument and conclusions,—and with special care

in noting all references to the bibliography of the subjects. Important translations from other languages may be entered entire. Abstracts of discussions will be given.

"While there will be all due formality in these procedures, there will be much informality and freedom in our discussions. This will give the peculiar and lively interest of the 'seminary method' that will make our work most successful. The discussions may be conversational on occasions, and it will be in order to ask questions of a reader at any time. The best results will come if each one will 'stand off and fight' in defense of his opinions when occasion gives him, in his belief, a good cause.

"The duties of a Secretary are assigned to the Pathologist, upon whom will rest the responsibility of forecasting the work of the Seminary, suggesting and arranging topics for study and discussion, assisting in investigations, and keeping up these records in good form, with the assistance of the house-pupil in the laboratory department."

A better idea can be given of the results of this experiment, and of the way we have learned to conduct the Seminary work, by presenting here the following list of subjects:—

Subjects discussed in the Seminary—Winter of 1889-90:

1. Bell's disease,—grave delirium.
2. Pathology of grave delirium and acute mania.
3. Physiology of bodily exercise. (Two meetings).
4. Jacksonian epilepsy. (Two meetings).
5. Jackson's theory of epilepsy and automatic action.
6. Jackson's theory of the evolution and dissolution of the nervous system.
7. The specific energy of nerves.
8. Katatonia.
9. Paranoia,—a history and tabular view.
10. Acute Paranoia.
11. Wahnsinn.
12. The genesis of delusions.

In this series of subjects much interest arose from the fact that one suggested another, and with most of them we were led by consecutive steps through a connected series of studies. For example, the physiology of bodily exercise opened the question of the storage and expenditure of nervous energy, which is a fundamental idea in the Jacksonian theories. The

last four subjects had a thread of interest common to all, in regard to the genesis of delusions and the nature of the so-called systematized delusions.

In the second year, a connected series of subjects was chosen by common consent, with a more strict application of the "seminary method;" and the work was most stimulating and enjoyable for all who took part in it,—each in turn furnishing an evening's contribution on his chosen topic. The use of the method will appear from the following list:

Subjects discussed in the Seminary—Winter of 1890-91:

1. Laboratory work in hospitals for the insane, with an exhibition and description of some apparatus. Experimental work in physiological-psychology.

2. The history of the cell-doctrine, and the protoplasmic theory of life, (covering about thirty-five years to 1870-75).

3. Development of the protoplasm theory in the last twenty years, and the attempted abolition of the cell-doctrine. (The differentiation of structure in nucleated cells.)

4. The new aspect of the cell-doctrine in the study of micro-organisms,—formerly considered as non-nucleated,—constituting the science of bacteriology. The classification of micro-organisms.

5. The process of fermentation, and alkaloids of decomposition,—the products of infectious micro-organisms and the autogenous materials, (ptomaines, leucomaines, and extractions),—and their toxic effect upon the human organism.

The discussion of these topics led through an historical review of the general subject of cell structure, and, diverging from that into an examination of recent investigations into the nature and sources of both infectious and autogenous noxious elements in the body. The end in view, of all this work, was the study of nervous exhaustion. There is evidence that the phenomena, which are regarded as manifestations of the condition called nervous exhaustion, are dependent upon two principal elements, viz.: loss of power from excess of exercise of normal function, and inhibition of power from toxic influences. It is therefore necessary to study the nature and effects of these poisonous elements in order to take into account these attendant factors along with the effects that purely manifestations of exhaustion from expenditure of nervous energy.

Two other collateral topics were therefore considered as preparation for taking up the main subject of the structure and function of the nervous system, and the discussions went on as follows:

6. The general pathology of the blood; and toxic elements with reference to the functions of the leucocytes, (phagocytosis).

7. The toxic effects upon the nervous system, of retained waste products, usually eliminated from the blood by the kidneys; and changes in the urine from nervous disease.

8. The histology of the central and sympathetic nervous systems.

9. Study of the effects of stimulation of nerve-cells,—microscopical appearances of their molecular contents. (Physiological shrinkage of nerve-cells).

This last subject was presented by Dr. C. F. Hodge, who favored the Seminary with a demonstration by the microscope and otherwise, of the results of his investigations at Johns Hopkins and Clark Universities, showing a shrinkage of nerve-cells under stimulation, and recovery of normal appearances after resting.* The next subject was:

10. Pathological changes in the elements of the central nervous system.

Having made such a review of the minor data for the study of our main problem, the Seminary was then prepared to take up such matters for investigation as the following:

11. The physiology of nerve-cells and fibres;—nutrition, storage and discharge of nervous energy,—and the nature of nerve-force.

12. The physiological effects of physical exercise upon the central nervous system, within the limits of normal fatigue:

13. Study of reaction-time to show changes under conditions of mental and muscular rest and fatigue, (concurrent with laboratory experiments).

14. The same in conditions of nervous exhaustion—pathological fatigue.

15. Studies of the therapeutic effects of physical exercise,—medical gymnastics, etc.

The first ten subjects were arranged for study in the order in which they are given, and were duly assigned, at the beginning

* *Amer. Jour. of Psychol.*, May, 1888, May, 1889, and February, 1891.

of the season, to the individuals who undertook to present them. Everyone's work on his own subjects gave him a lively interest in the others, as each in turn made his contribution to the review of the history and literature of the larger subject; interest was aroused also in the undertaking of new investigations. There were concurrent contributions from the side of the laboratory, which thus furnishes the field and means for the newer work, in which the physiological, clinical and pathological studies may be brought together. To this end the pathologist is distinctly charged with clinical duties, holding the office of assistant physician, and having a certain share in the work of the wards. In fact it is precisely in this way that it is proposed to practically adapt the researches of the laboratory, with its "instruments of precision," to clinical and diagnostic uses. The last three subjects are added to indicate the lines of investigation that lie open for experimental work in the laboratory.

In regard to the Seminary the work of any given meeting does not involve the preparation of a formal written paper, but is made up by a presentation of the reader's notes of his own readings upon the topic under immediate consideration, by citations read from the books and journals of the medical library,—and by the further discussion of the questions raised by the other members who are engaged in the study of allied topics.

The volume of records forms an addition to the seminary method; and being well indexed it will be a valuable body of well-arranged data for subsequent reference.

This method is radically different, it will be seen, from the treatment of disconnected subjects common to ordinary "medical society" work, but it is elastic enough to permit the taking up of any topic of interest for the time being; or any line of enquiry once started may be followed where it logically leads, otherwise than by a prearranged series. In fact it was our practice on occasions, in order to give time for preparation upon some regularly assigned topic, to occupy the time of a meeting with a collection of brief reviews, made from articles upon some subject found in the current numbers of the medical journals, thus constituting also a journal club, the work of which should also be methodically organized. The difficulty of effective study in the midst of hospital routine is too well known. It is only

by systematic attention to the matter that anything worthy can be accomplished. This method not only furnishes an excellent system, but it minimizes labor, arouses interest, multiplies the effectiveness of the working power of each member of the seminary, and may be easily put in practice by the medical staff of any hospital. It would be well worth a trial in any medical society.

JOURNAL CLUBS.

BY HENRY M. HURD M. D.,
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It is evident to all who have given any attention to the present condition of institutions for the care and treatment of the insane, that the tendency to large establishments with ever-increasing numbers of patients and a corresponding increase in routine duties, is directly detrimental to the study of insanity by members of the medical staff. The danger, in fact, is imminent that medical officers of every grade, will become absorbed in duties which are largely administrative, and which, from their pressing character, leave little time for original investigation or for keeping informed of the studies of other workers by systematic reading of journals which are devoted to neurology or psychiatry. The paper of Dr. Cowles has pointed out in a most suggestive manner what can be done by the "Seminary Method" to promote such study and to increase the common stock of knowledge.

The object of my present brief communication is to indicate an important auxiliary to this method by a systematic mode of studying and analyzing the current literature of our specialty, through the agency of what are known in colleges and universities as Journal Clubs. The object of a Journal Club is to present the literature of any given subject in such a thoroughly digested manner that all persons who attend the Club may know what is being done in each department of it by other writers and workers. Every institution for the insane which has a medical staff of even three members, can advantageously organize such a club; and to the mammoth institutions which have large staffs, such a club can be made most efficient and profitable for good—so

efficient and profitable as to be a necessity. The three desiderata are, a good presiding officer, a good supply of journals, and a regular hour for meeting each week. The methods which can be pursued may vary somewhat, and as all are good, I will briefly describe three independent methods of conducting a club:

1. A popular method is to divide the supply of journals up among the members of the club, and to require each member to report upon such papers as may appear to him of value in his journals. Under this method of conducting a club, each member is expected to inform the others of the contents of the journals which he has read, and to summarize the articles which have proven new, or of interest to him. This is an excellent method to pursue in getting a club started, and is probably the best adapted to the ordinary conditions under which clubs will be organized. It is a good method to ascertain individual tastes and preferences in study, as well as to keep all the members of the club conversant with the whole range of the literature of the specialty. It may be considered the first stage in the evolution of every Journal Club. After, however, it has been pursued for some time, it usually paves the way for another and better method of study, which I will describe as the second.

2. A better method is to allot different subjects to the members of the club. Thus, for example, to one member can be assigned summarizing and reporting all articles relating to the pathology of insanity; to a second, all articles relating to the study of forms of insanity; to a third, everything which relates to the treatment of insanity; to a fourth, special topics like general paresis, epilepsy, etc.; to a fifth, allied topics like hypnotism or hystero-epilepsy, etc.; to a sixth, new remedies, etc., etc.—the list in fact being capable of almost indefinite expansion. This method systematizes the work better and makes it more fruitful for good. It is, however, open to the objection that the reports may become too prolix, and may include matter which is not especially profitable,—the value of the work depending on the good judgment and scholarship of the reporter.

3. A third method, and one which has proven the most successful in university work, is for the presiding officer to assign articles to the different members of the club,—of course with a due regard to the special tastes of the individual and the line of

his studies, and to devote each evening to one or more topics. It is also customary for the presiding officer to fix a limit of time for the report, and to guide any discussion which may arise.

For the success of a Journal Club it is essential:

1. That the work be made obligatory. It will not do to rely upon a zeal for study which may be cooled by other duties or by social obligations. The work should be made a part of the regular routine of the institution, and should not be pushed aside by any trivial matter. The same rule which governs excuses from any regular professional duty should govern all absences from the Journal Club. No new man should be added to the staff who does not intend to devote himself as loyally to this as to any other hospital or asylum duty. If outsiders are admitted—and I should say the more the better—they should come into the work under the same conditions.

2. A definite hour which will be reasonably sure to be free from interruption should be selected, and rigidly adhered to. Such an hour ought not to be at the close of an exhausting day's work.

3. The proceedings should be informal, and free discussion should be expected. The journals studied should have the widest possible range. French, German and Italian journals should all be laid under contribution.

4. The work should be thoroughly supervised by the superintendent or some person whom he may select. Whoever takes charge of the club ought to especially prepare himself to sum up each subject and to present its practical bearings upon the better study or the better treatment of insanity. This will often involve study and extra exertion; but such mental effort is recreative, and a grateful change from routine work.

The advantages of a Journal Club are manifold. A few of them may be mentioned.

1. It develops a spirit of professional study among the members of the hospital or asylum staff. The spirit of investigation and inquiry is easily lost unless special efforts are made to develop it. This is especially true where routine duties constantly press themselves upon the attention. Unless a spirit of study and inquiry is sedulously cultivated among the younger members of a medical staff, the zeal for professional advancement speedily disappears.

2. It provides for the systematic acquisition of knowledge by a division of labor; and the least possible waste of time on the part of each person concerned. This is an age of coöperation in literary work. Library and subject catalogues are undertaken by associated laborers; and enterprises which would be impossible to an individual become practicable to the many. Witness the success of H. H. Bancroft's gigantic historical enterprises. The work which he has finished by the aid of collaborators would have consumed four hundred years of individual effort, had such a length of years been granted to the head of the undertaking. It is in keeping with the spirit of modern study to economize time and effort by multiplying workers. Psychiatry and neurology are so vast that each student cannot read the good, the bad and the indifferent. The grain should be winnowed before it is gathered into store-houses.

3. It supplies a common field of study where the members of the staff may meet for contact of mind with mind. By means of it, individual tastes and aptitudes for study may be utilized for the common good. It gives a broader professional aspect to asylum work by bringing each member of the staff into relation with the whole field of psychiatry. It also affects the readier training and more speedy assimilation of new members of the staff. Young men come to asylum work fresh from medical schools and hospitals with a keen zest for scientific work. This should be utilized, and habits of regular study in lines of psychical research should be acquired as speedily as practicable. The Journal Club will also contribute materially to the unification of a staff which may have been brought together from different schools of medicine. This is too often neglected in large asylums.

ABSTRACTS AND EXTRACTS.

THE PULSE IN STUPOR.—James R. Whitwell contributes a series of sphygmographic tracings, which reveal a "typically high tension pulse, in which the cardiac factor is not very active." He suggests the term "Stenotic Dystrophoneurosis" as suitable for this form of mental disease, basing his claim upon the following summary of his investigations:

1. In cases of intermittent stupor, during the stage of stupidity, the vessels are in a state of tonic contraction, producing a condition of high tension.
2. Portion of this spasm may be removed by amyl nitrite.
3. This spasmodic condition is completely removed when the stage of lucidity occurs, giving place to a stage of lowered tension, either as a causation, concomitant, or resultant in relation to the changed mental state.
4. This change is constant in its occurrence.
5. Strict parallelism occurs between the mental and pulse condition, as shown by sphygmographic tracings taken during the transition period.
6. Considering the changes in the pulse in this disease, and the fact that a stenosis of the vessels at the base of the brain can be frequently shown post-mortem to be present, it is possible that this physical impediment to the blood supply of the brain may be sufficient to account for this form of mental disease, and thus warrant the establishment of it as a mental disease, with a name indicating its pathology approximately.—*Lancet*, October 17, 1891.

J. M. M.

INFLUENZA AS A CAUSE OF MENTAL DISORDER.—At a meeting of the Medical Society of London, November 2, 1891, Dr. G. H. Savage read a paper on the Relationship of Influenza to the Neuroses. In summarizing, he quoted Dr. Leledy, Interne at the Asylum at Bourges:

1. Influenza, like other fevers, might set up psychopathy.
2. Insanity might come on at various periods of the disease.
3. It might start any form of insanity.
4. No specific symptoms resulted from it.
5. The rôle of the influenza varied in the production of the insanity.
6. It might be the predisposing or the exciting cause.
7. In all cases there was some acquired or inherited predisposition.
8. The insanity followed from altered brain nutrition, possibly toxic.
9. The onset of insanity was often sudden, and bore no relationship to the severity of the influenza.
10. The curability depended on general rather than special conditions.
11. The insane were less disposed to take it than the sane.
12. It had cured psychoses in rare instances.
13. The insane might have mental remission during the influenza.
14. There was no special indication in the treatment.
15. Influenza might lead to crimes and medico-legal issues.—*Lancet*, November 7, 1891.

J. M. M.

BORAX IN EPILEPSY.—Dr. Mairet, in *Le Progrès Médical*, gives the results of observations of the use of borax in thirty-one cases of epilepsy, extended over many months. Five patients received no benefit; in four cases the drug

was discontinued on account of toxic effects; in nineteen, a diminution in the number of attacks was obtained, and in some of these the improvement was very marked, while in three complete cessation of the attacks during several consecutive months was secured. In comparing these results with the effects obtained by bromide of potassium in the same cases, it was found that in the majority of cases borax and bromide act in the same manner; that bromide is most efficacious in cases of so-called idiopathic epilepsy; and that borax has its greatest effects in cases of epilepsy associated with gross organic disease. Bromide often acts successfully when borax fails.—*Lancet*, November 7, 1891.

J. M. M.

PERIPHERAL NEURITIS ASSOCIATED WITH EPILEPTIC FITS.—Dr. James Cagney, in the *Lancet*, November 14, 1891, reports two cases in which these conditions were concomitant. He refers to the toxic origin of neuritis, which may be regarded as only the peripheral manifestation of the morbid agent. Epilepsy is not known to be produced in this way, but mania and the most serious psychical disorders accompany alcoholic neuritis, and it is conceivable that an epileptic fit might be determined in one predisposed to it by an obscure toxic influence, of which the persisting evidence would be some degree of neuritis.

J. M. M.

BERLIN INSANE ASYLUM.—Consul-General W. H. Edwards reports to the government on the condition of this institution. (*Reports from the Consuls of the United States, No. 131, August, 1891.*) In 1889 there were 2,501 patients under municipal care, as against 1,582 in 1883, an increase greater than the increase in population by three to one. In 1887 two "so-called colonies" were established at a short distance from the municipal asylum at Dalldorf, making the census of the three institutions nearly 1,400. The surplusage were accommodated in private asylums, which numbered twenty-three in March, 1889. The private asylums are supervised by the Curatorium of the Municipal Asylum, each member of the Curatorium having certain private asylums to visit at least once during the year.

During the year 1888-89 a new teacher was added to the staff of the Municipal Asylum, "whose business it is to instruct in elementary branches patients sent to him by the physicians, and to interest others in geography, history and the natural sciences. He also directs small musical, declamatory and theatrical entertainments." In the same year thirty-six men did 8,450 days' work in the field, and sixteen women 838 days' work during the summer. In the park eighty-four patients did 19,820 days' work. Tailors, shoemakers, carpenters, bookbinders, upholsterers, straw-plaiters, painters and hair-pluckers, raised the total value of patients' labor to \$4,016.49. The average cost of maintenance *per diem* in private asylums was forty-eight cents.

J. M. M.

DUBOISIN AS A SEDATIVE AND HYPNOTIC.—Dr. Ostermayer (*Allg. Zeitschr. für Psych.*, xlvii, 3 and 4) regards the sulphate of duboisin as superior to hyoscin in not having the inconveniences of the latter drug. It is chiefly a hypnotic,

producing sleep in from twenty to thirty minutes, and is to be given in doses varying from one to three milligrammes, according to the character of the case. It is said to produce no dangerous or disagreeable symptoms, and although continuous use produces tolerance, by leaving it off for a short time the full effect can be again obtained.—*Lancet*, October 10, 1891. J. M. M.

PROGNOSIS IN EPILEPSY.—Dr. A. W. Wilmarth, (*Medical News*, December 12, 1891,) contributes a paper on this subject based upon the study of 342 cases in his care, and 437 cases that had recovered before coming under his observation. When the first attack of convulsions occurred before the third year of life, in a little more than half the children attacked they ceased before the age of puberty. When the spasms persist, or begin after puberty, recoveries are rare. Persistence of convulsions is usually indicative of structural changes and mental instability or decadence will, as a rule, accompany them. When convulsions begin after injury to the head, making their appearance after the immediate effects of the accident have passed away, they are usually of grave significance, indicating that organic changes have followed the traumatism. In 273 cases in which hereditary influence was established, in nearly 58 per cent. the convulsions ceased. Of cases in which no neurotic taint was discovered, 38 per cent. recovered. The inheritance of sluggish brains, less liable to respond to irritability by convulsive explosions, explains the comparative immunity of the former class. Periodicity of spasms suggests a definite cerebral lesion. The prognosis is grave when mania accompanies the spasm, and especially when transitory mania seems to replace the accustomed spasm. J. M. M.

THE ITALIAN PENAL CODE ON INSANITY.—The following provisions of the new Italian penal code as reported in the *Journal de Méd. de Paris*, No. 43, 1891, may be of interest:

Whoever, at the moment of committing crime is found to be in a condition of mental disorder, such as to cause him to lose his consciousness or freedom of action, he will escape the penal consequences of the same; if, nevertheless, the judge considers it dangerous to give him his liberty, he shall be put in the hands of the proper authorities and the necessary measures in his case shall be taken.

When the mental disorder, without absolutely destroying responsibility, yet diminishes it decidedly, the penalty is less severe and in certain cases a special establishment may receive the condemned.

Whoever illegally deprives a person of his liberty is punishable with from one month to five years imprisonment and a fine of a thousand lire or more; if at the same time he is found guilty of threats, cruelty, or deceit, or has acted from a spirit of revenge or for money consideration, the punishment is increased from three to eight years imprisonment and from five hundred to a thousand lire fine. If the victim is a parent, or a husband or wife, a member of parliament, or a public officer, or if the restraint results in a severe injury to the person, health or fortune of the victim, punishment is increased to from five to fifteen years imprisonment and the fine from a thousand to five

thousand lire. The punishment may be reduced to one-half or even one-sixth, if the party in fault restores the subject to liberty before any proceedings and without any injury.

The public officer who abusing his functions or neglecting the conditions or formalities prescribed by law, deprives any person whatever of his liberty, is punishable by detention of from three months to seven years and in cases above provided for, from six to fifteen years.

Any physician, surgeon or other medical officer who gives a false certificate, intended to deceive the authorities, is punishable with imprisonment of fifteen days or more, or a fine of a hundred to a thousand lire; and the same penalty applies to whoever makes use of the false certificate. If from this should result admission into an asylum of any sane individual or any other injury, the imprisonment may be increased from six months to three years. When the fraudulent document has been given for a fee, the punishment is from three months to two years imprisonment and a fine of from three hundred to a thousand lire, also confiscation of the fee.

Whoever by imprudence, negligence, inexperience in his art or profession, or by not observing the regulations or established discipline, causes a death, is punishable with from three months to five years imprisonment and from a hundred to three thousand lire fine.

Whoever causes physical injury, disturbance of the health or intelligence is punishable with imprisonment from one month to a year; from one to five years for causing permanent injury of sense, or of an organ, or persistent disorder of speech, etc.; and from five to ten years for any incurable mental or physical disease, loss of special sense, of a hand or foot, the power of speech, etc.

If there is no disease or incapacity for work produced or if such does not last for more than ten days, the punishment cannot exceed three months imprisonment or a thousand lire fine. Whoever abandons any person incapable on account of any mental or physical disease from providing for his wants or of whom he has the care, is subject to from three to thirty months imprisonment, and if there follows any serious injury to the mind or body the term may be extended from thirty months to three years.

Whoever permits the insane intrusted to him to wander away or does not immediately notify the authorities of his escape, is punishable with a fine of two hundred and fifty lire or more.

Whoever without authority or the necessary authorization takes charge of any one who has been declared insane, is liable to a fine of from fifty to five hundred lire, and if necessary to one month's imprisonment. In case of the director of the asylum or a physician in practice, to the above is added suspension.

H. M. B.

MORPHINE IN INSANITY.—According to Voisin morphine is a drug that is especially useful in a number of forms in insanity and its dangers have perhaps been a little exaggerated. It is especially against the element of pain that it is of value, and it is possible that too little account is taken of the complaints of patients, especially in hypochondriacal cases. It should be kept in mind that there is often a real basis for many of these complaints and that the imagination is not altogether in fault.

* One great advantage of morphine in the treatment of insanity is that it can be employed hypodermically. Large doses are not required. Dr. Voisin commences with as little as one to two milligrams, and increases one milligram a day for several days, after which the dose remains stationary. Two injections daily are sometimes necessary, as the good effects last only a few hours.

Very satisfactory results have been obtained in neuropathic cases where there is reason to believe that anæmia of the brain existed. It is injurious, however, in congestive and inflammatory insanity and in that connected with an atheromatous condition of the arteries. Great care should be taken in the diagnosis as to these points.

Idiosyncracies as to the drug are not infrequent and are hard to explain. Some patients can hardly tolerate it at all, and it should only be employed in cases where it produces its normal physiological effects.

H. M. B.

ALCOHOLISM AS A CAUSE OF GENERAL PARALYSIS.—The following are the conclusions of a paper by M. Rousset, read before the French Association of Alienists, at Lyons, in August last, as reported in the *Archives de l'Anthropologie Criminelle*, etc.:

1st. The part of alcoholism in the etiology of general paralysis has always been, and is still the subject of controversy; the opinions of different authors taking four principal directions.

2d. Certain patients considered formerly as alcoholic paralytics, have in fact been given to excesses in drink. But these excesses have only occurred since the beginning of the general paralysis, so that they are rather its effect than its cause. This form of recent alcoholism should therefore not be credited with the production of the meningo-encephalitis.

3d. The correlative progression of alcoholic insanity and paresis does not necessitate the deduction that the latter is produced by the former. Ethnographic and geographical considerations scarcely appear to favor any more or less preponderant role of alcoholism in the production of general paralysis.

4th. The extracts from the reports of all the superintendents of the French asylums given in the general report of M. Claude (des Vosges) show rather clearly that the present opinions of clinicists on this subject are still quite diverse.

5th. It appears to us that in the great majority of cases the role of alcoholism in the etiology of general paralysis is subordinate to something undetermined and unknown and sometimes incomprehensible, which is met with in all diseases and which appears to be a necessary prerequisite to the development of the meningo-encephalitis; that is the predisposition which may be according to the subject, either cerebral and arthritic, vesanic and nervous or alcoholic. In certain cases which are not very common, chronic alcoholism aside from all predisposition, causing gradually a process of connective proliferation and cerebral sclerosis, may terminate in general paralysis.

H. M. B.

The following papers were also read before the meeting:

THE TEMPERATURE IN EPILEPSY.—M. Mirat communicated his researches on this subject by taking the rectal temperature of epileptics at short intervals both during the periods when their attacks were frequent and also when they were free from them. He arrived at the following results: No modifications were observed prior to the attack, but there was a reduction of temperature during the attack, (especially if it was severe); again a rise, not reaching the normal, during the period of stertor and after the attack, perhaps for several hours, an increase above the normal. A prolonged slumber after the attack prevented this latter reaction, and agitation during this period of stertor produced a decided rise. The author compared these results with those of the modifications of the nutrition (urinary composition) which he had previously studied. He observed also, besides their attacks, that epileptics suffered sometimes from fever, the cause of which was impossible to determine.

He added also a few words on another symptom that he had studied experimentally, namely pupillary dilatation. This symptom exists before the convulsion together with pupillary rigidity, while during the attack, fluctuations occur, succeeded in the stertorous period by myosis.

In discussing this communication M. Magnan stated that he had not observed the lowering of the temperature at the moment of the attack and believed that it would be difficult to determine. He had observed a rise of temperature during the epileptiform attacks in the spinal type of general paralysis.

H. M. B.

DIMINUTION OF THE URINARY TOXICITY IN INSANITY.—MM. Weil and Raphael Dubois reported experimental researches showing the diminution of the toxic quality of the urine in certain cases of insanity. Their method was to inject the urine, concentrated by evaporation, of an insane patient and of a sane person separately into the veins of rabbits. They found that the urine thus treated, though more dense, more rich in solid matters than that of the healthy individual taken in comparison, was borne without injury, while the same quantity of the healthy urine caused death. This loss of toxicity they do not attribute to a retention of poisonous products, but to a defect in their elaboration, or as they express it, to an "*empoisonnement en retour*." As a therapeutic consequence we may administer to such insane patients the active principals of the urine or their toxic equivalent, (chloral, digitalis, etc.)

H. M. B.

STATIC ELECTRICITY IN THE TREATMENT OF INSANITY.—M. Ladame reported results of some studies in the treatment of mental diseases by static electricity. After insisting on certain precautions and the graduation of the usage of this agent, he reported that he had found it useful in a large number of cases, and especially in depressed conditions. He reported also a case of circular insanity with alternations of four months of excitement with eight months of depression, in which the latter stage had been notably ameliorated by this means.

H. M. B.

OCULAR AFFECTIONS IN INSANITY.—M. Royer reported the following general conclusions from his observations:

- (1.) As regards the nature of the lesions there is nothing special to insanity in the ocular affections of the insane.
- (2.) The right eye in right handed and the left eye in left handed individuals are most frequently involved.
- (3.) In a general way the insane, subject to ocular disorders, may be said to have hallucinations.
- (4.) The proportion of the insane who present ocular lesions is about one-third of the whole.
- (5.) Ophthalmoscopic examinations may indicate the administration of heart tonics in certain patients who having cardiac disorders apparently complex and present disorders of the intraocular circulation.

Special Conditions—(1.) In general paralytics it is desirable to substitute, for the symptom of pupillary inequality, that of pupillary rigidity, which is more general and more characteristic.

(2.) Physiological excavation of the papilla is a very common condition in the degenerates.

(3.) Hypermetropic idiots are true idiots of intrauterine origin. Emmetropic and myopic idiots are generally demented from their early infancy.

H. M. B.

THE DOUBLE CHLORIDE OF GOLD AND SODIUM IN GENERAL PARALYSIS.—M. Boubila reports that this drug given in doses of two milligrams to one centigram presents certain advantages in the treatment of paresis, and no special disadvantages. The increase of red globules went parallel with the increase of weight.

The drug is most indicated in the early stages of the disorder, but it may be useful also in the later periods, as it appears to retard the fatal termination of the disease.

H. M. B.

ACETONE IN THE URINE OF THE INSANE.—The following are the conclusions of a memoir by De Boeck and Slosse in the *Bull. de la Soc. de Méd. Mentale de Belgique*, September, 1891:

(1.) When we wish to determine the presence of acetone in the urine, it is necessary to collect it with the greatest care. It should be preserved in well stoppered bottles, exactly filled; or better, be distilled immediately.

(2.) The iodoform reaction of Lieben is, of all the tests proposed, that which is best adapted to reveal the slightest quantities of acetone. We may also have recourse to Gunning's test. Where these two reactions have failed all others are superfluous.

(3.) The reaction to perchloride of iron has no value as a test for acetone; it is characteristic of diacetic acid.

(4.) There is a physiological acetonuria. Its importance depends upon the richness of the alimentation in nitrogenous substances. The determination, therefore, of a small quantity of acetone in the urine of the insane has no pathological significance.

(5.) The quantity of acetone contained in the urine has no relation with the psychic condition of the patient, (depression, agitation, fear, hallucination).

(6.) The quantity of acetone increases considerably during inanition; it is worth while, therefore, to commence artificial feeding when in the patient, who refuses to eat, the amount of urinary acetone is decidedly augmented.

H. M. B.

THE BROMIDES AND THEIR THERAPEUTIC ACTION.—At the session of the Soc. de Biologie, October 21, (reported in *Le Progrès Méd.*, No. 43,) M. Féré read some notes on the action of bromides, of which the following are the conclusions:

The bromide of strontium may be employed in epilepsy in the same doses as the bromide of potash. The accidents of intoxication are observed when this quantity is exceeded. The therapeutic action appears to be the same.

When we examine, in the autopsies of epileptics who have taken large quantities of bromides, and also of animals which have been subject to experiments and saturated with this drug, for the organ where the salts have accumulated, we find that the liver contains a greater quantity than the brain. The amount of bromide retained in the organism is very great. This state of saturation by the bromides has been accused of predisposing to tuberculosis. M. Féré has not observed this in his patients, but experimentation confirms it. Guinea pigs saturated with bromides and inoculated with tuberculosis succumb more quickly than animals not thus medicated.

H. M. B.

BORAX IN EPILEPSY.—M. Mairé, *Le Progrès Médical*, No. 41, October 10, 1891, concludes the opening lecture of his clinic on mental diseases at Montpelier, the subject of which was the use of borax in epilepsy, as follows:

Summing up the conclusions that follow from our study in regard to the use of borate of soda in the treatment of epilepsy, whether considered by itself alone or in comparison with bromide of potash, we will say:

(1.) Borate of soda may have a real utility in the treatment of epileptic attacks, which it may diminish or even entirely suppress for many months.

(2.) Borate of soda succeeds better in symptomatic epilepsies than does the bromide of potash.

(3.) Bromide of potash, on the other hand, acts better than borate of soda in the epilepsy neurosis, and in this class of cases it is only after the bromide has failed that we need employ the borax.

Such are the results of my investigations, and they are sufficient, it appears to me, to justify the introduction of the borate of soda into the therapeutics of epilepsy, and consequently to require me to enter into some details as to the therapeutic methods in the use of this substance. This will be the subject of a coming lecture.

H. M. B.

CHLOROHYDRATE OF HYOSCINE.—According to MM. Ramadier and Sérieux (Soc. de Thérapeutique,) *Le Progrès Médical*, No. 42, 1891, this substance is an active poison, which may be, however, employed in therapeutics in doses of one-fifth of a milligram, gradually and cautiously increased. It diminishes the heart pulse with dilatation of the capillaries, and decreases the salivary secretion. It also dilates the pupil and produces paresis of the lower limbs. It loses its effect by use, and the doses have to be increased. He has carried it as high as a milligram or a milligram and a half without accident. Its quieting effects are almost instantaneous.

It should not be employed in cachectic cases, or in subjects of Bright's disease.

H. M. B.

JACKSONIAN EPILEPSY OF SUB-CORTICAL ORIGIN.—Dufloq, *Rév. de Méd.*, 1891, (Abstracts in *Bull. de la Soc. de Méd. de Gand.*, LVIII, IX, 1891.) The patient described was taken suddenly with a sort of aura under the form of a feeling of constriction commencing at the epigastrium, and ascending rapidly to the pharynx, whence the pain extended toward the left side of the jaw. Shortly after occurred an epileptiform attack; first, the tongue was drawn backward, the head turned slightly to the left, the angle of the mouth and the whole left side of the face was drawn to the left and involved in clonic convulsions, the mouth was partly opened, the eye was not involved. The convulsions soon involved also the shoulder, which rhythmically rose and fell, the arm and forearm were only involved through the shoulder, their muscles were relaxed. During the convulsions the head inclined more to the left, and was held there by the contracted muscles.

The end of the attack was signalized by a rather abundant salivation, which commenced a little before its termination. There was no loss of consciousness, or rise of temperature, or increased rapidity of pulse. The attacks recurred frequently during the day, and were followed by facial paresis.

During the days following they increased in number, threatening the life of the patient. Trephining was performed by M. Lucas-Champonnière, but after the incision of the membranes nothing abnormal was discovered. The patient died suddenly on the evening after the operation.

At the autopsy there was found in the white substance of the brain, underlying the lower part of the ascending frontal convolution, a small sanguine cyst, of old date and well-capsulated. The cortical substance was intact, and was separated from the tumor by a thin layer of white substance.

The author has been unable to find any well-authenticated case comparable to this, and thinks it is unique. This is not strictly the case, however, as other more or less similar cases have been described; but it is noteworthy.

H. M. B.

THE ACTION OF CHLORAL ON THE KIDNEYS.—Cavazzani, (*La Riforma Med.*, June 8th, 1891, abstracts in *Annales de la Soc. de Méd. de Gand.*) has studied the action of chloral hydrate on the kidneys, and comes to the following conclusions:

(1.) Hydrate of chloral injected into the abdominal cavity produces an irritant action on the functional epithelium of the kidneys. After the first, or rather after several injections, there follows a visible granular degeneration of the epithelium of the *tubuli contorti*. After prolonged administration of the drug this degeneration reaches the epithelium of all the renal tubes except the straight tubes.

(2.) In more severe cases hydrate of chloral produces a swelling involving all the renal epithelium with all the signs of an incipient acute parenchymatous nephritis. The glomerules of Malpighi and the interstitial connective tissue are not involved. The intensity of the lesions depends upon the duration of the administration of the drug, and also upon a special susceptibility of the subject. The administration of the drug by the mouth may also cause epithelial degeneration in the *tubuli contorti*, but to a less degree and only after prolonged administration of large doses.

(3.) These lesions of the renal tissue generally disappear some time after the cessation of the giving of the drug. This at least takes place in the milder cases which always follow the prolonged medication, but it is not to be looked for in case of severe troubles. Albumen is not found in the urine even in cases where the autopsy shows very decided lesions.

(4.) This last fact probably explains the errors of clinical observations in regard to the damage on the kidneys produced by the hydrate of chloral.

These observations show the need of prudence in the administration of chloral, especially in cases of kidney disease.

H. M. B.

THE OLFACTORY APPARATUS.—Dr. M. P. Trolard, Professor of Anatomy at the Medical School of Algiers, has published a series of articles in the *Archives de Neurologie*, Nos. 60, 62, 64 and 65, on the connections of the olfactory lobes. His researches were suggested by the theoretical assumptions, which he is aware will not meet universal credence, that the olfactory bulbs are homologous to spinal nerves, not to lobes of the cerebrum, and that each spinal nerve has three different connections—a spinal arc, connecting the afferent and efferent fibres of the nerve; an indirect cerebral arc, consisting of two portions, the one connecting the nerve-roots with the optic thalamus and corpus striatum, the other connecting these ganglia with the cerebral cortex; and, finally, the direct arc, connecting the nerve-roots with the cerebral cortex by uninterrupted fibres. He has confined himself, as to methods, to gross dissections of the human brain, leaving comparative anatomy, histology and embryology to those who are more expert in them than himself.

The conclusions to which he comes are, briefly, as follows:

The olfactory cortex is contained in the fascia dentata of the cornu Ammonis, which is continuous with the formation of the nerves of Lancisi. Whether or not it comprises anything more, the author leaves undecided.

The fibres of the roots of the olfactory bulb are dispersed in the gray matter of the anterior perforated space, which is equivalent to Charcot's posterior root-zone in the case of a spinal nerve. From this proceed the fibres which constitute the three arcs mentioned above.

The spinal arc is formed by a band of fibres, sometimes pretty distinct, on

the inner surface of the cerebral peduncle. It comes in close relation with the corpora mamillaria, enters the pons at its anterior border, and can, he thinks, be followed to the neighborhood of the eminentia teres. Further than that point he has not succeeded in tracing it.

The first, or intermediate portion of the indirect cerebral arc is formed by a band of fibres which passes beneath the gyrus uncinatus, accompanies the optic tract, along its exterior border, to the corpus geniculatum externum, and turning over the posterior border of the optic thalamus, spreads over its posterior surface, and ends by forming a thick envelope over its anterior tubercle. The second or cerebral portion starts from the anterior tubercle as Vicq d'Azyr's bundle, which passes to the corpora mamillaria, the origin of the anterior pillars of the fornix, which completes the connection with the gray matter of the fascia dentata.

The direct arc consists of two portions, the one, including the external root of the olfactory nerve, passing directly into the gyrus uncinatus; the other consisting of fibres that pass upward through the septum lucidum, and enter the anterior pillars of the fornix.

The author also believes the pineal gland to be a part of the olfactory apparatus, basing his opinion on its evident connection with the anterior tubercle of the optic thalamus.

W. L. W.

MOTOR PATHS IN THE SPINAL CORD.—Rossolimo, of Moscow, publishes in *Archives de Neurologie*, July and September, 1891, some experiments which he has made with a view to determining the course of the motor and sensory fibres in the spinal cord. The following are the principal results of his investigations:

When a section is made through a lateral half of the cord, it is immediately followed by complete motor paralysis of the portion of the body below and on the same side with the section, with exaggeration of sensibility on that side, and abolition of sensibility of the corresponding portions on the side opposite to the section. When the animals (Guinea pigs) survived the immediate effects of the operation, some return of motion was noticed in the paralyzed limb in about a week after the operation, and in the course of four or five weeks motility was pretty well restored, although there always remained a slight paresis of the limb. The sensory phenomena remained essentially unaltered as long as the animals were preserved—in one instance nearly six months after the operation.

If, now, another hemisection of the cord was made, on the same side with and above the first, no effect was observed, either as regards sensation or motion, on the parts below the original lesion. If, however, the opposite side of the cord was divided, motion and sensation were at once completely abolished on both sides.

Median longitudinal section of the lumbar enlargement produced complete abolition of sensibility in both hind legs, with but very slight impairment of motion.

The examination of the cords showed that in no case was there any regeneration of nervous substance in the original incisions, even when motor

power had been almost completely restored. Descending degeneration was found in the pyramidal tract, and ascending degeneration in the column of Goll and the direct cerebellar tract on the side of the lesion.

The author concludes, accordingly, that in cases of restoration of motor power after hemisection of the cord, the impulses are transmitted through the opposite side.

W. L. W.

DOUBLE PERSONALITY.—Dr. J. Seglas, physician to the Salpêtrière, reports two cases in the *Archives de Neurologie*, July, 1891. The first concerns a man, thirty-three years old, suffering from delusions of persecution and of personal importance, accompanied with very intense hallucinations. He is troubled by what he calls "the phonograph," consisting of a concert of voices which sometimes seem near at hand, sometimes to come from a distance, uttering disagreeable and insulting words. They are telephonic and polyphonic, and are also penetrating, in the sense that the words are re-echoed fifty or a hundred times. He thinks that he has passed into the state of a "registering phonograph." In addition to these voices there is another which he calls the "labial voice." This is a voice which speaks within his chest, and is understood, not by the sense of hearing, but by the movement of the lips. Sometimes it compels him to say quite the contrary of what he intended. He believes himself to be possessed by spirits. Hallucinations of sight are also present in this case.

The second case is that of a widow woman, sixty-three years of age, who believes herself to be possessed by five priests, one of whom inhabits her head, one her throat, one her stomach, and one her abdomen. She has paræsthesiæ in various parts of the body, which she attributes to the machinations of these priests. The one in her abdomen gives her the colic by his movements. They have stolen her heart, her nails, her palate and tonsils; have taken away her memory, her feelings and her thoughts.

They talk to her from various parts of her body, and she understands what they say, not by hearing, but by the movements of her tongue. Frequently one hides under her tongue and moves it. When they speak to her from other regions, the one that inhabits her throat and tongue acts as interpreter, repeating, by means of her tongue, what they say. They sometimes also talk to her by movements of the eyes, but she usually cannot understand what they say to her in this way, which she considers surprising, as the same thing goes on in her eyes as in her tongue, and she has no difficulty in understanding the latter.

Hallucinations of hearing have been infrequent. She has had hallucinations of sight, and the senses of taste and smell; the priests have sent her thirty-six different bad odors which enter by the nose and pass out by the mouth. She believes that she diffuses an odor resembling that of sulphur. She will not look any one in the face, for fear that if the eyes of any one met hers, that person would also become possessed.

In the discussion of the cases, Dr. Seglas emphasizes the motor element, which he believes to be one of the principal causes of the feeling of double personality.

W. L. W.

AMYLENE HYDRATE IN EPILEPSY.—At the meeting of the Psychiatric Society of Berlin, March 16, 1891, Dr. Weber, of Dalldorf, gave his experience with this drug in seventy carefully observed cases of long standing, about equally divided between the sexes. All had used bromides, and many presented evidences of bromism. Most of the patients used the drug from two to three months. The dose varied from two to eight grammes (one-half to two drachms) daily. Eighty per cent. showed no marked variation in their convulsions; in fifteen per cent. there was a decided increase, and in five per cent. a decrease. One patient remained entirely free. With the exception of this last mentioned case, all the patients showed disturbances of the general health, consisting in drowsiness, mental sluggishness and digestive disturbances, which led the speaker to give up the treatment, even in those cases in which it seemed to exercise a favorable influence on the convulsions. In ten per cent. of the cases a very striking diminution of the number of fits was noticed on the resumption of the bromide treatment, the number falling in some cases to one-fifth or one-sixth of what had occurred under the same treatment previously to the use of the amylene hydrate.—*Centralblatt f. Nervenheilk*, June, 1891.

W. L. W.

DISSOCIATION OF THERMIC SENSIBILITY IN SYRINGOMYELIA.—Déjerine and Taillant (*Ann. de Médec.*, April 15, 1891,) report a case in which the sensibility for touch, pain and moderate variations of temperature was normal, but on the forearms and hands heat sufficient to blister the skin was not felt as heat, and the same was true of intense cold. At the autopsy a hollow medullary glioma and parenchymatous degeneration of the cutaneous nerves of the hands were found.—*Ibid*.

W. L. W.

CONDITION OF THE BLOOD IN THE INSANE.—Winckler, in an inaugural dissertation on this subject, gives the results of investigations into twenty-one cases. He finds that in all forms of insanity, while the number of red corpuscles is not usually diminished, the proportion of hæmoglobin is much lower than in health. The proportion was lowest in depressive forms of insanity. Paroxysms, whether of mania or melancholia, produced a diminution of both number of corpuscles and of hæmoglobin which improved with the subsidence of the attack. In convalescence both improved coincidentally with the gain in weight; the onset of terminal dementia, on the other hand, notwithstanding the gain in weight, was associated with a progressive deterioration of the blood.

Smyth, of the Kent County Asylum, (*Journal of Mental Science*, October, 1891,) comes to substantially similar conclusions from an investigation of 137 cases. He finds, in all forms of insanity, a moderate diminution of the number of red corpuscles—from eighty to twenty per cent.—with a very much greater loss of hæmoglobin—twenty-six to forty-two per cent.—the latter in secondary dementia, which also gives the lowest proportion of red corpuscles. The specific gravity of the blood, on the contrary, is increased in all forms, and most so in secondary dementia.—*Ibid*.

W. L. W.

INFLUENCE OF HYPNOTICS ON THE EXCITABILITY OF THE RESPIRATORY CENTRES.—Loewy (*Berl. Kl. Wochenschr.*, 1891, No. 18,) reports the results of experiments on six persons by increasing the respiratory stimulus by means of the administration of carbonic acid in equal concentration. He found that the irritability of the respiratory centre was constant in the same person in the waking condition, and was not increased in sleep, whether the latter was natural or induced by chloral hydrate, amylene hydrate or chloral formamid. It was diminished by morphine, both in the waking and sleeping state. None of the hypnotics used appeared to influence the process of oxydation in the body.—*Ibid*, July, 1891.

W. L. W.

BROMISM AND INTESTINAL ANTISEPSIS.—Féré (*Nouv. Iconographie de la Salp.*, Nov. et Dec., 1890,) reports a large number of cases in which he found it necessary, for the suppression of epileptic convulsions, to administer large doses of bromides, sometimes as high as eighty grains per diem. In many instances he had been able to permanently counteract the tendency to digestive disturbances and cutaneous eruptions by the administration of onaphthol and salicylate of bismuth (one drachm of the former and one-half drachm of the latter per diem), which could be administered for months without any injury.—*Ibid*.

W. L. W.

DIPHTHERITIC PARALYSIS.—Hochhans (*Virchow's Archiv. Bd. 124, Heft. 2,*) found, on examination of the paralyzed nerves and muscles of four persons who had died of diphtheria, that the nerves were intact, apart from slight increase of nuclei in the small muscular branches. In the muscles, there was parenchymatous cloudiness of the fibres, proliferation of nuclei, and increase of the interstitial connective tissue. In the heart, there was an extraordinary accumulation of cells around the vessels, resulting in some cases in displacement, in others in atrophy of muscular fibres. The cause of the paralysis is accordingly believed to be inflammation of the muscles, principally located in the interstitial tissue.—*Ibid*, August, 1891.

W. L. W.

BOOK REVIEWS.

Reports of Austrian Hospitals for the Insane.—I. Jahresbericht der niederösterreichischen Landesirrenanstalten Wien, Ybbs, Klosterneuburg und des Irrenstaltfiliales Gugging-Kierling pro 1889. (Annual Report of the Lower Austrian Public Institutions for the Insane at Vienna, Ybbs, Klosterneuburg, and the Branch Institution at Gugging-Kierling for 1889.)

II. Die Privatheilanstalt zu Ober-Doebling, Wien, XIX Bezirk, Hirschengasse 71. II. Bericht ueber die Leistungen der Anstalt vom 1 Juli, 1875, bis 30 Juni, 1891. (The Private Hospital at Ober-Doebling, Vienna. Second Report on the Work of the Institution from July 1, 1875, to June 30, 1891.)

The reports of the public asylums of lower Austria, printed together in a thin pamphlet, present pretty much the same general features with those of the preceding year, noticed by us not long ago. Peculiarities of the statistical portion are reports of all cases of intercurrent illness, of all injuries, even slight cuts and bruises, and all attempts to escape. There is still general complaint of overcrowding with its attendant evils.

The mortality in the different hospitals was as follows:

	Number Treated.	Deaths.
Vienna,.....	1,689	185
Gugging-Kierling,.....	455	40
Ybbs,.....	565	29
Klosterneuburg,.....	440	46

Pulmonary tuberculosis furnished the largest number of deaths in all except the institution at Ybbs, in which seven deaths were credited to "marasmus" against five to tuberculosis. In Klosterneuburg twenty out of the forty-six deaths were from phthisis, the "morbus Viennensis" of the Vienna hospitals.

As in the reports of the preceding year, alcoholism cuts a large figure in the etiological tables. In the Vienna hospital it is given either as the sole or a contributing cause in nearly forty per cent. of the male patients received during the year.

At Ybbs, an epidemic of trachomasis is reported, which seems to have involved a large part of the population. - At one time there were 125 pronounced and 78 doubtful cases.

All of the other institutions suffered from the epidemic of influenza. There as elsewhere, employés were attacked in much larger proportion than patients. One chronic case of insanity is reported to have recovered at Vienna, in consequence of an attack of influenza, and another improved remarkably, but subsequently relapsed.

The private hospital at Ober-Doebling is conducted by Professor Obersteiner, who is widely known by his work on the Central Nervous System. As stated in the title, the report is the second in the history of the institution, and covers a period of sixteen years. It is a volume of 191 pages, beautifully printed on heavy paper, with wide margin, and profusely illustrated

with photogravures of the buildings and grounds. The make-up of the report gives the impression, which is confirmed by its contents, of abundant means, applied with liberality and intelligence.

The hospital is situated in a suburb of Vienna, recently incorporated in the city. Its grounds comprise about eighteen acres, and, with exception of the space occupied by the buildings, are almost exclusively used for purposes of recreation, forming a large and pleasant park, with extensive views over the city and the surrounding country. With exception of a small house accommodating seven patients, there is but one hospital building, which is so arranged as to allow of a satisfactory classification of patients, and to avoid disturbance of those who are quiet by the noisy and disorderly. The rooms are large, well lighted, and, to judge by the illustrations, luxuriously and tastefully furnished. One article of furniture, which is not pictured, I will describe, as nearly as may be, in the words of the report:

"For restless, helpless patients, who will not remain in bed, lattice beds are in use, like those used for little children, except that there is a similar woven lattice like a roof to close them above, by which it is made impossible to climb over the side." Shall we venture to say this would seem to be not very unlike what was within the memory of persons still living celebrated as the U * * * c * * * ? As the special law for the government of the hospital strictly forbids the use of mechanical restraints except when necessary for the safety of the patient, it is evident that it does not come under that category.

The building is heated by steam, with indirect radiation, lighted, with exception of the patients' rooms, by gas, and supplied with water from the city water works. It may serve as an illustration of the backward state of continental Europe in what we are apt to consider indispensable conveniences, that gas was not introduced until 1877, and the consent of the authorities could not be obtained to the introduction of the water, which was flowing on the street, into the building until 1883. Not until then were there any satisfactory bathing facilities. Parlors, rooms for amusements and a chapel, are provided and appropriately furnished. There are rooms for 72 patients, which is the largest number that has ever been under treatment. The number at the time of preparing the report was 69. Although it has often been proposed to enlarge the building, owing to inability to receive many patients for whom application was made, in the words of the report, "These plans, however, have always finally been rejected, in the conviction that a hospital of this sort should not exceed a certain size. Every patient needs special care and consideration; every one should receive the closest attention; the treatment should be strictly individualized, while at the same time a certain unity in administration must be preserved. An institution should therefore only contain so many patients that all these conditions can be satisfied, and therefore, notwithstanding so many favorable opportunities, an enlargement of the institution has not been carried out."

For the care of the patients, there are two physicians besides Professor Obersteiner, twenty-eight male and seventeen female attendants, and other employes sufficient to bring the total number up to 78, or more than one to each patient.

The hospital receives voluntary patients suffering from nervous disease. Of the 60 under treatment at the time of the report, seven were of this class. During the period covered by the report, 669 patients have been classified as insane, and 98 as nervous invalids. The latter are classified under the heads of psychical excitement, psychical depression, hypochondria, apoplexy, epilepsy, syphilis of the nervous system, alcoholism, morphiism and chloroformism. Of the insane, 181 have been discharged as recovered, 145 as improved, 142 as not improved, and 139 have died. Of the total number of insane received, 427 were men and 242 women. Of the deaths, 113 were of men and 26 of women. This disproportion is accounted for by the prevalence of general paresis in the male sex. This disease was the cause of death in 90 cases—87 men and 3 women. In striking contrast to the public hospitals, only four, two of each sex, died of pulmonary consumption.

In regard to employment and recreation, the fact is noted that it is more difficult to engage private patients in such work as would be beneficial to them than in a public asylum. The place of labor must be largely supplied by amusements. Music seems to be rather a specialty. There are thirteen pianos in use in the hospital, to say nothing of other instruments, and many of the patients take systematic and advanced instruction in music. Others have drawing lessons, and other branches are studied to some extent. Facilities are provided for all the ordinary games and for gymnastic exercises; there are opportunities for walks and rides in the grounds, and, for those whose condition allows it, elsewhere; frequent musical and dramatic entertainments are given, and many of the patients are taken to entertainments in the city. Evidently Professor Obersteiner does not agree with Dr. Batty Tuke as to the mode of life that is best for the general run of the insane, although the fact is explicitly recognized that there are cases that need complete rest, and confinement to bed.

One point in regard to the assignment of attendants to duty seems worth mention. It has been found that it is better, both for attendants and patients, that the former should not remain uninterruptedly in charge of the same patients. The monotony of associating with only one or a few insane persons is wearing and depressing, and the attendants become, after a time, incapable of doing their best work. Accordingly it is the practice to make weekly changes of attendants, due regard being had for their special qualifications. This is not only advantageous in the respect already mentioned, but is more likely to bring to light any little negligences on their part.

An interesting chapter is devoted to some clinical observations. With regard to the connection of syphilis with general paresis, unquestionable proof of previous syphilitic infection was obtained in 74 cases of insanity, of whom 72 were men and 2 women. Of these, 64 men and 2 women were general paretics. The total number of paretics treated was 194, of whom, accordingly, 33.7 per cent. were certainly syphilitic. The number of other patients was 475, and the proportion of ascertained syphilitics 3.4 per cent. The percentage of general paretics among the cases of ascertained syphilis was 88.9.

No other of the usually assigned causes of general paresis was found with anything like the same frequency. Thus, hereditary predisposition was found in 25 cases; mental over-exertion in 18, &c.

In view of the contradictory statements of different writers in regard to the frequency of hallucinations in general paresis, the material furnished by the hospital was examined with reference to this point, with the result that satisfactory evidence of hallucinations was only found in 20 out of the 194 cases.

It is found that many more paretics die during cold than warm weather. Out of 91 deaths of paretics, 42 occurred in the three winter months, and 59 in the six months from October to March, inclusive, while of 51 deaths from other causes, only 21 occurred in the same six months.

Twenty-one cases of morphine habit came under treatment during the period covered by the report, of whom eleven were physicians and one the wife of a physician. On this subject the writer takes less radical ground than many. He holds that it is useless to break off the habit so long as the disease which give rise to it persists, as relapse is certain to occur. In cases of deficient activity of the heart, whether from organic lesions or disturbances of innervation, it should be undertaken with the greatest caution. The only death occurred in the case of a highly hysterical man, from sudden heart-failure, during apparent convalescence. The administration of morphine should never be stopped abruptly. The dose should be diminished rapidly at first, slowly towards the end. Constant regard should be had to the patient's condition, and in case of alarming symptoms, a sufficient dose of morphine, for relief, should be given without hesitation.

Notwithstanding the dangers of cocaine, it has been found of very material advantage, when properly administered, in relieving the distress of abstinence from morphine. The matter seems of sufficient interest to warrant the quotation in full of the directions:

"1. Recourse should only be had to cocaine when the symptoms of abstinence begin to be very severe, accordingly about 24 to 48 hours after the last dose of morphine.

"2. Cocaine is always to be given internally, never hypodermically; best in the following permanent solution:

R	Cocaini muriat,	0.5
	Acid. salicyl,	0.1
	Aqu. destill,	100.0

"3. The single dose may be from 0.05 to 0.1 of cocaine, administered as required several times in the day, but a daily dose of 0.5 should never be exceeded.

"4. On the second or third day the daily quantity should be rapidly diminished, and the cocaine treatment should not in any case be continued more than 5 to 6 days."

Administered in this way, it is claimed that cocaine, in many cases, relieves the distress of morphine abstinence, as it does the feeling of hunger, thirst and weariness.

Space will only allow us to note, from an interesting discussion of the temperature in nervous attacks, that in a case of general paresis in which the temperature was systematically taken, a decided fall of temperature was repeatedly noted just preceding convulsive seizures. It is suggested that

this might enable the physician to avert such attacks by timely administration of chloral.

The concluding chapter deals with the subject of treatment. In regard to psychical treatment it was hardly to be expected that anything very original should be produced. The advantages of treatment of the insane in a well-conducted hospital over that which is usually possible in their homes are forcibly set forth, and emphasis is laid on the importance of individual treatment, and the possibility of doing harm by the injudicious use of measures, such as work, amusements and the discussion of morbid ideas, which are of the highest value in properly selected cases. Hypnotism has been tried with little success in insanity, although beneficial in some cases of nervous disease. The insane are usually difficult to hypnotize, and very little amenable to suggestions.

Chloral hydrate, notwithstanding its many drawbacks, is considered to be the most useful hypnotic. It is not given in larger doses than three grammes in twenty-four hours, and only exceptionally, and never for a long time, to paralytics and patients suffering from weak heart.

Paraldehyde has the advantage over chloral of not depressing the circulation, but soon loses its effect unless the dose is rapidly increased, and the weaning from its accustomed use produces almost severer disturbances than in the case of morphine. The dose is not allowed to exceed six grammes, and its administration is suspended when it loses its effect.

The disadvantages of sulphonal are mostly connected with its slight solubility, which is thought to be the explanation of the alarming symptoms sometimes noticed from the continued use of small doses—the drug remaining undissolved in the digestive passages until favorable circumstances allowed a large quantity to be absorbed at once. Accordingly it is not administered in doses of more than two grammes, never continuously for a long time, never when digestive power is weak, and, as far as possible, in solution.

Urethan is too feeble; amylene hydrate is very similar in its effects to paraldehyde. The other new hypnotics have not been sufficiently tried to warrant a judgment founded on experience. Cannabis Indica in doses of from 0.05 to 0.1 gramme, has been found of service in some cases, especially when it is desirable to relieve feelings of depression.

The bromides, in occasional moderate doses, are valued as sedatives. A warning is given against the combination of large doses of bromides by day and of chloral by night. Morphine and codeine are in limited use, not as hypnotics, but for the relief of depression in hypochondriacal and melancholic cases. Hyoseyamin and hyosein have both given excellent results, not only in allaying excitement, but by a favorable influence on the circulation, but the experience of their dangerous effects has been such that they are seldom used. Neither is thought to have an advantage over the other in this respect.

Digitalis has proved a valuable sedative in cases of restlessness combined with vascular excitement. A calamative effect has been noticed from salicylate of soda, antipyrin and phenacetine.

An account is given of some experiments with salicylate of soda in epilepsy. Administered in full doses—usually four grammes daily—it had an unmistakable and very marked effect in reducing the frequency of the convulsions, but

the constitutional disturbances from its continued use were so great that it had to be given up. Bromides continue to be the main dependence in this disease. In the status epilepticus, reliance is placed on chloral, in dose of three grammes. When it cannot be given by the mouth, it may be administered by enema. If, as sometimes happens, the enema is not retained, the drug can be safely and conveniently given by the hypodermic method. In this case, at least, two grammes of chloral should be used, diluted with not less than ten times the quantity of water. Of course the administration of such a quantity of fluid with the ordinary hypodermic syringe is a tedious process. In case no suitable instrument is at hand, a hypodermic needle can be attached to an ordinary syringe by a bit of rubber tubing. It is preferable to introduce it slowly, to distribute it through the tissues by massage, and to divide the dose among several points of injection.

We have by no means exhausted all the points of interest in this report, but a review must have an end. We cannot end this one more appropriately than by quoting the author's closing words:

"Not diseases, but patients, are to be treated; we must not generalize, but individualize; we should neither proceed in a stereotyped way, after old tradition, nor hastily after new fashions, but according to well-weighed experience, not according to dead books alone, but with right estimation of the living man and his special conditions, unwearied and undismayed, relying on medical science and medical art."

W. L. W.

Les Fonctions du Cerveau, Doctrines de l'Ecole de Strasbourg, Doctrines de l'Ecole Italienne. Par JULES SOURY. Paris, 1891: Bureaux du Progrès Médical. (*The Functions of the Brain, Doctrines of the School of Strasbourg, Doctrines of the Italian School.*)

This work, which is mainly a re-publication of articles which have appeared in the *Archives de Neurologie* and *L'Encéphale*, is a critical review of the subject of cerebral localizations, with special reference to the labors of certain German and Italian physiologists. In the first hundred and forty-four pages the author devotes his attention to the investigations and views of Goltz, of Strasbourg, and his followers, which he describes under the heading of "The Doctrines of the School of Strasbourg." The conclusions of his critical examination are, as may be inferred, not in accord with the views of the Strasbourg professor, which are not only not always in agreement with the best established physiological facts, but are also in some points hardly borne out by our present knowledge of the finer anatomy of the nervous centres. M. Soury is fully appreciative of the merits of Goltz as an investigator, but holds that he has in spite of himself been compelled to bear witness to the truth of the general principles of localization of functions of the brain, which he started out with the intention of combating.

Nearly two-thirds of the work is given to the critical statement of the investigations and views of the numerous Italian physiologists who have engaged themselves in the elucidations of the functions of the brain. The author recognizes an ethnic element in the character of the Italian schools, and pays a very high and deserved tribute to Italian science. We cannot go at length into the details of this portion of the work, or do better, indeed,

than to reproduce his general statement or summary of the views of the Italian school. He sums them up as follows:

(1.) The doctrine of the functional localizations of the brain, taken from the Italian memoirs, as a whole, is essentially eclectic in its nature; before all and solely preoccupied with experimental facts and clinico-anatomical observations, it holds itself at equal distance from all extreme theories, and endeavors to bring out whatever truth the contrary theories may contain.

(2.) The different functional areas of the cerebral cortex, besides their own proper territory or central tract, possess also common grounds or zones of irradiation where they work into each other (*s'engrènent*), mingle or penetrate in part, and pass insensibly one into another. It follows that the various functions of the brain are so intimately connected with each other that it is impossible to injure one alone without others being more or less affected.

These zones of irradiation or common territories are much less extensive in man than in the lower animals; the functional centres of the human brain have their limits better defined and more fixed.

All the zones of sensitive sensorial innervation converge in the dog toward a neutral or common territory situated in the inferior parietal lobe. Lesions of this "centre of centres" cause at the same time disorders of vision, audition, olfaction and general sensibility. They affect the whole psychic life of the animal and modify profoundly its character (Luciani).

(3.) The cortex of the brain is the seat of the higher psychic functions (perception, ideation, voluntary impulsion and attention), but not of the simple sensations and organized motor impulses; the ganglia of the base, the opto-striate bodies, appertaining to the cortical system, may in part replace, as centres of perception and ideation, the function of the cerebral cortex.

(4.) The different points of each functional sphere of the cortex hold with the corresponding organs of sense, almost identical relations; it is therefore possible that the different parts of the same centre may replace each other, which would be impossible did isolated relations exist between the peripheral nervous elements of a sensory organ and the nervous elements of the corresponding cortical centre.

(5.) The relations of each functional centre of the cortex with the corresponding peripheral organs are bilateral for sight, hearing and smelling, and unilateral for the sensori-motor sphere. It is necessary to take account, however, for this last named centre of the anatomico-pathological researches on the descending degenerations of the pyramidal fibres consecutive to local lesions in the sensori-motor area.

(6.) The morphological varieties of the nervous elements of the cerebral cortex have no relations with their functions. The only criterion in this regard is to be found in the nature of the nervous prolongations and their anatomical connections, and not in the form of the cell.

(7.) In the different zones of the cerebral cortex, the two types of cells of motility and sensibility are mingled and confounded in various proportions, consequently the functions of sensibility and motility, far from being distinct, coincide and have a common anatomical localization.

(8.) The functional specificity of the different cortical areas depends, not

upon any specific difference of the nerve elements, but on the nature of the sensations of the peripheral organ with which these centres are connected through the nerves.

(9.) No direct, isolated, nervous transmission, either centripetal or centrifugal, exists between two central and peripheral cells, or groups of cells. The communication of the nerve fibres between these takes place in the central nervous system, not by anastomoses of the direct prolongations of the nerve cells, but by means of a vast net-work made up of the ultimate ramifications of the cylinder axes of the two kinds of fibres of sensation and motion.

(10.) The nervous muscular tendinous organs of Golgi are the peripheral organs of the muscular sense.

(11.) The cerebral activity, like muscular action, causes in the beginning in its dynamic stage, or phase of active work, an appreciable cooling of the brain substance, like that in the muscle, followed in the static phase, or that of repose by an increase of temperature.

(12.) The successive variations of the temperature of the brain during work, constitute veritable thermic oscillations of cooling and heating. These thermic oscillations correspond to the rhythm of the processes of functional disintegration and repair of the nervous centres. Cerebral work is a form of energy. The intelligence has its chemical, thermic and mechanical equivalents.

The volume concludes with a very instructive appendix on the subject of cortical epilepsy as it has been treated of in the literature of the Italian school. It is noteworthy in this that while the Italian physiologists were yet among the first and strongest advocates of the cortical theory of epilepsy, it is held by them with certain reservations. A very striking case illustrating the possibility of even partial epilepsy from subcortical lesions observed by Seppili is here given in detail. The patient, a female, had Jacksonian epilepsy, well marked of the left side, and at the autopsy there was found a complete destruction of the nervous substance of the motor region of the right hemisphere and a descending degeneration through the internal capsule into the pyramid and the left lateral column of the cord. The opto-striate bodies were normal. The case seems difficult to explain, except by the hypothesis that under certain conditions the so-called cortical or Jacksonian epilepsy may occur without the intervention of the cortical centres—the view accepted by the Italian physiologist.

M. Soury is a sympathetic critic and is courteous and fair even when most disagreeing with the views of the author he criticises. His work is a valuable contribution to the literature of cerebral physiology, as affording a clear and satisfactory statement of certain phases of the still somewhat varying views on the subject of functional cortical localizations.

H. M. B.

Gunshot Wound of the Left Cuneus, with Right Homonymous Hemianopsia.
By J. T. ESKRIDGE, M. D., Denver, Colorado. Reprinted from the
Medical News, October 17, 1891.

The victim lived five days, and opportunity was had for the determination of the hemianopsia. The autopsy revealed complete destruction of the cuneus, without interference with other portions of the brain.

J. M. M.

CAPE OF GOOD HOPE. *Reports of the Medical Committee, the Vaccinating Surgeon, the Inspector of Asylums, and on the Government and Public Hospitals and Asylums, for 1889.* W. J. DODDS, M. D., D. Sc., Inspector of Asylums.

On the 31st of December, 1890, there were 595 certified patients (310 Europeans and 285 natives) on the registers of the asylums and hospitals of the colony, an increase of 23 during the year. Excluding transfers, the number of admissions was 129; of discharges (including one escape), 54; deaths, 51. Of those discharged, 40 had recovered, 12 more relieved, and two were not improved. The recovery rate, excluding transfers, and calculated on the admissions, was 17.1 per cent. Six deaths were attributed to general paralysis; nine terminated other affections of the brain, including epilepsy; eight were due to senility, and the remainder followed various intercurrent physical diseases.

The lunacy system of the colony includes five receptacles for the insane, besides the jails and jail hospitals. Two hospitals have been condemned, and one only, the Graham's Town asylum, is said to compare favorably with well-equipped institutions of other countries. Many patients are confined in private houses, not subject to governmental control. The hospitals are visited quarterly by a local board, and semi-annually or oftener by the Inspector of Asylums. Legal admissions are made either under special rules promulgated by the Colonial Secretary, or in conformity with the lunacy law of the colony, which authorizes commitment only upon the perpetration of some criminal offence. Under the provisions of this Act thirty-one patients secured treatment through the friendly instrumentality of the following offences: murder, homicidal assault, assault and threatening assault, horse and sheep stealing, petty theft, incendiarism, intention to commit arson, breaking windows, willful damage, fraud, contravening a minor railway regulation, indecent exposure, willful trespass, abusive language, being idle and disorderly, being a dangerous lunatic, attempting suicide, insane with a suicidal intention. The opprobrium and injustice wrought by this primitive statute lead to evasion, and result in applications to the government for the admission of insane persons as into the ordinary hospitals of the country. "It has thus come to pass that about five-sixths of the cases detained in asylums are outside the provisions of the law, and are detained by virtue of these circular instructions."

It is also noted that 117 patients, including many recent and curable cases, were in custody during the year in jails, for periods of time ranging from a few days to a year and upwards. This deplorable condition of affairs leads to an earnest repetition of the plea of Dr. Dodds' previous report, that adequate accommodation be provided, and the lunacy law be amended and extended.

Despite unfavorable and discouraging circumstances, the work of the year has been progressive and characterized by marked improvement in the internal economy of the colonial institutions. Exercise in airing-courts has been abandoned for long walks; wards, "the homes of patients," have been brightened; dietaries have been enlarged; evening entertainments have been frequent; and every available method of occupation has been utilized for its value as diversion. There has consequently been a "gratifying diminution

in the amount of seclusion and restraint." It is predicted that in the future "greater attention will be paid to the medical and scientific aspect of insanity," and that the ideal of the service will be attained in the spirit of the motto, "to cure the curable, and to brighten the lives of those that cannot be cured."

J. M. M.

A Case of Fracture of the Twelfth Dorsal Vertebra, followed by Injury to the Spinal and Sympathetic Nerve-Supply of the Bowel in the Region of the Ileo-Cæcal Valve; Intestinal Hemorrhage and Death on the Seventh Day. By J. T. ESKRIDGE, M. D., Denver, Colorado. Reprinted from the *Medical News*, October 10, 1891.

The patient was struck from above by a cage containing brick, weighing about two thousand pounds. The body was bent backward, sharply arched at the junction of the dorsal and lumbar vertebrae, and the head carried between the feet. There was transient paralysis of the legs, without bladder or bowel complications. On the sixth day after the accident, a gastro-intestinal crisis followed the ingestion of cabbage, and death ensued. The autopsy revealed gangrene of the bowel for about six inches on either side of the ileo-cæcal valve, and destruction of the twelfth thoracic ganglia of the sympathetic nerve.

J. M. M.

The Prevention of Fire, Chiefly with Reference to Hospitals, Asylums and Other Public Institutions. By WM. PAUL GERHARD, C. E. Second Edition. Published by the Author.

This pamphlet emphasizes the value of sound building construction by contrasting it with defective and unsafe methods. The principles of fire-proof and slow-burning architecture, and the proper arrangement of chimneys, flues, elevators and stair-cases are set forth. Full consideration is given the establishment of night-watching service, fire-brigades, and the general equipment of public buildings necessary to the control of fire.

J. M. M.

Hallucinations in the Insane. By EDWARD B. LANE, M. D., Assistant Physician to the Boston Lunatic Hospital. Reprinted from the *Boston Medical and Surgical Journal*, September 10, 1891.

Hallucinations were present in 196 of 307 selected cases of acute insanity. Hallucinations of hearing were found in 175 cases; (of other senses without auditory hallucinations, in 21); of sight in 77 cases; of smell or taste in 13; touch in 4; viscera, 9; sense of equilibrium, 3.

In 160 cases of mania, melancholia and paranoia, auditory hallucinations were present in 127, or 79 per cent., and visual hallucinations in 47, or 29 per cent. In 61 cases of general paralysis, other organic brain disease, epilepsy and alcoholic insanity, auditory hallucinations were present in 26 cases, or 44 per cent., and visual hallucinations in 18 cases, or 22 per cent.

The relative preponderance of auditory hallucinations in the psychoses lends support to the theory that auditory images are more necessary to thought than others, and the presence of hallucinations of various senses in organic brain disease indicates a general distribution of sensory irritations. Educa-

tion in the subjective nature of hallucinations might prevent the genesis of delusions and the necessity of commitment to a hospital, except in the degenerative psychoses, where permanent benefit is not to be expected.

J. M. M.

The Shattuck Lecture—1891—Neurasthenia and Its Mental Symptoms. By EDWARD COWLES, M. D., LL. D., etc. Read before the Massachusetts Medical Society, June 9th, 1891. Boston: David Clapp & Sons, 1891.

In reading this pamphlet one is first of all impressed with the extraordinary care with which it is written. Dr. Cowles has brought to bear upon this most elusive and difficult subject a mind well stored, not alone through painstaking, analytical observation, but through the widest range of careful reading. As a result, we have here presented perhaps the most exhaustive and comprehensive exposition of the mental aspects of neurasthenia that has yet appeared. The clinical picture is clearly drawn; the bed-side symptoms are outlined succinctly; and a rational system of treatment is suggested. As a clinical study, this work is therefore important. There are numerous hints of practical import regarding diagnosis and treatment. It is satisfactory to see that little stress is laid upon specific medication. The physician who treats neurasthenia successfully must depend upon wise discriminative judgment; he cannot be a learned automaton. Advice as to the free use of diluents and hints as to the limitations of the rest cure are among the points of practical therapeutic significance.

But it must not be supposed that this is a mere clinical study. It is, in reality, something far more than this; it is a philosophical inquiry into the conditions underlying neurasthenia, and the relations of these conditions to other allied ones. It is essentially a synthetic work. There are many critical observers, many analysts; but few men are prepared by nature and education to coördinate, to classify. Fortunately, Dr. Cowles' well stored mind is of the coördinating type; so we have here presented not neurasthenia the clinical entity, but neurasthenia the somewhat widely varying condition, shading from healthy normality on the one hand into melancholia on the other. Its connotations are definitely set forth; there is no more of vagueness and uncertainty than must appertain to so complex a subject; yet, there are no sharp boundary lines drawn to offend one's sense of fitness. Sharp boundary lines are seldom found in connection with the functionings of so complex a thing as the human body; yet we too often see individual cases emphasized in descriptions as if they stood out alone from all else normal or abnormal. "Ha!" cries the enthusiast, when some slightly aberrant example of a familiar malady is brought to his notice, "we have here a new type of disease." And so we go on transforming symptoms into diseases until one might almost expect every case to become a new "type."

Such a study as this of Dr. Cowles is a standing rebuke to these would-be-classifiers,—but, alas, a warning that will remain unheeded. This is an era of medical brick-making. It is not so much that the bricks are without straw as that we lack mortar with which to cement them together. From very profusion of basal material, the would-be structure of medicine is little better than a formless heap of bricks, unamalgamated, inchoate. We need

now not more bricks so much as more mortar. Still, we are on the right track—that of scientific induction—and anything is better than the visionary, *a priori* deductions of our predecessors. But it is refreshing, in the midst of the wilderness of isolated cases with which medical literature is at present over-burdened, to find an occasional rational attempt to coördinate cases into a system; and it is especially gratifying in the present instance to observe so philosophical a result.

If one starts to speak less generally, one scarcely knows where to begin or end, so much is there to commend. The sections on "Pathology of Neurasthenia," on "Habit, Diathesis, and Idiosyncrasy," on "Autogenous Toxic Substances," etc., are far too good to be epitomised. Nor is it worth while to discuss definitely the parts of the work that lend themselves more readily to synopsis, for we feel sure that every one who is sufficiently interested in the subject to read this notice will secure and read the work itself. There is one incidental assumption in the work, however, to which we wish to call attention, as a casual reader may fail to notice it. We refer to the predication of the transmissibility of acquired tendencies. Dr. Weissman would demur very strenuously to this, but we opine that the majority of alienists would concur with equal emphasis.

H. S. W.

Multiple Cerebro-Spinal Syphilis. By B. SACHS, M. D., Professor of Mental and Nervous Diseases in the New York Polyclinic. Reprinted from the *New York Medical Journal* for September 19, 1891.

The author gives the histories of six cases, with illustrations of the lesions found in one. Naturally, the symptoms vary greatly with the localization of the disease. The diseases with which it is most likely to be confounded are multiple cerebro-spinal sclerosis and tubercular meningitis. From the former it can be distinguished by the absence of intention tremor, nystagmus and scanning speech; from the latter, by the much more rapid course of the tubercular affection and the fact that it is apt to be much less widely distributed, usually giving rise to a limited basilar or spinal meningitis, with formation of solitary tubercles. Syphilitic spinal meningitis may simulate tabes, and syphilitic disease of the meninges of the convexity may be difficult or impossible to distinguish from general paresis. The author thinks this may account for some of the cases of prolonged remission, or complete recovery that have been reported in the latter disease.

Myotonia and Athetoid Spasm. Clinical lecture delivered at the Philadelphia Hospital. By CHARLES K. MILLS, M. D., Neurologist to the Hospital, and Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic. Reprinted from *International Clinics*, April, 1891.

The first of the two cases described in the lecture is that of a man, forty years of age who has suffered since childhood from clumsiness and stiffness in muscular movements, especially of the hands. For the past seven years he has frequently fallen in walking, without loss of consciousness, apparently from a sudden giving way of the muscles. At first this seemed to be confined to the right side, but of late he thinks that both sides are implicated. It seems to be implied, though it is not stated, that his spastic trouble has been

much aggravated since he has been subject to these attacks. At present he has difficulty in initiating any muscular movement. If he attempts to rise from a chair, his muscles stiffen, and he can only push himself to the erect position by a strong effort. He cannot arise when sitting or kneeling on the floor, without the help of some one who will fairly lift him to his feet. Opening the hands when closed requires a strenuous and prolonged muscular effort. Closing the mouth when opened may require a minute's time, assisted by pressure from the hand. He walks with a stiff and shuffling gait; after going a short distance the muscles act with more freedom, but soon become exhausted, stiffen, and put him in danger of falling. He has but little strength, and cannot grasp anything with the hands. Speech is indistinct. He suffers from pain in the head and lumbar region. The cutaneous sensibility to pain in the lower extremities is increased; tactile sensibility does not seem to be very much affected. Knee-jerk and allied phenomena are absent. The muscles respond to both the galvanic and faradic currents, with a tendency to persistence of the contractions. The wave-like contractions said by Erb to be characteristic of Thomsen's disease were not obtained. The muscles are usually large and firm and presented but slight mechanical excitability. The author is inclined to consider the case one of Thomsen's disease, although he does not express himself positively on this point.

The second case is one of athetoid spasm and myotonia on voluntary effort, in a man fifty years old, who suffered eight years previously from what was thought to be a sunstroke, followed at irregular intervals, for several months, by fits, the precise character of which is not ascertained. The first of these left him partially paralyzed on the left side, and, at some date which cannot be positively determined, he began to be troubled with spastic and athetoid movements of the left side. At present, any attempt at voluntary movement brings on a combination of tonic and athetoid spasms, most marked on the left side, but extended in a less degree to the right. The athetoid movements involve principally the muscles of the left hand, the right being slightly affected in the same way. The other muscles are thrown into more or less rigid contraction. He is able to walk with great effort. There are considerable areas of cutaneous anæsthesia, most extensive on the left side. Knee-jerk is increased in both legs, producing tonic spasm of the extremity. Muscle-jerk, front-tap and ankle-clonus are present. The author is inclined to locate the lesion in the neighborhood of the optic thalamus.

Unilateral Ophthalmoplegia, Probably Dependent upon Thrombosis of the Cavernous Sinus with Associated Meningitis. By the same author. Reprinted from the Philadelphia Hospital Reports, Vol. 1, 1890,

The patient, a woman, 55 years of age, had, at the time of admission, complete paralysis of the entire muscular apparatus of the left eye, with extensive anæsthesia in the regions supplied by the fifth nerve. Vision was good in the affected eye, but was lost in the following week. She was in a dull mental condition. Her illness had begun several weeks previously, with neuralgic pains in the left side of the face and head, and the ophthalmoplegia had been first observed about a week before admission. No history of syphilis could be obtained. Shortly after admission, slight ptosis, orbital pain and

haziness of vision developed in the right eye. Great improvement under the use of large doses of sodium iodide with mercurial inunctions. The author quotes a case of Coupland, presenting many points of similarity, in which thrombosis of the cavernous sinus, with basic meningitis, was found post-mortem, and is of the opinion that his case was of the same nature.

The Diagnosis of Incipient Melancholia. An Abstract of a Lecture delivered before the Class of the Kansas City Medical College. By S. GROVER BURNETT, A. M., M. D., Kansas City, Mo., Lecturer on Clinical Diseases of the Nervous System in the Kansas City Medical College. Reprinted from the *New York Medical Journal*, for May 2, 1891.

The trio of symptoms on which the author relies for the recognition of simple and agitated melancholia in their early stages are mental depression, insomnia, and the pain in the back of the neck described by Gray, which the author says he had observed prior to the publication of Dr. Gray's article, and for which he proposed the name "nuchalgia." He illustrates his position by histories of two cases.

Unrecognizable Brain Lesions. By HUGH B. MEREDITH, M. D., Danville, Pa. Reprint from the *Alienist and Neurologist*, July, 1891.

Report of a case of epilepsy, which remained under treatment for three years without presenting any unusual features, and then developed right hemiplegia, aphasia, and mental hebetude. These symptoms increased, and she died comatose in about three weeks. The autopsy revealed a sarcoma of the size of a pigeon's egg in the left operculum, with a cyst containing seven drachms of serum extending upwards and backwards from it, under the ascending frontal, ascending and superior parietal convolutions.

Assuming the epilepsy to have been caused by these lesions, the author remarks upon the generalized character of the fits, and the absence of paralytic symptoms until shortly before death.

Ueber Influenzapsychosen. Von Dr. RICHARD JUTROSINSKI in Strassburg. Sonderabdruck aus der *Deutschen Medicinischen Wochenschrift*, 1891, No. 3. [The Psychoses of Influenza. By Dr. RICHARD JUTROSINSKI, of Strassburg. Reprint from the *Deutsche Med. Wochenschrift*, 1891, No. 3.]

The author calls attention to the rather remarkable fact that, up to the recent epidemic, medical literature is almost completely silent as to mental disturbances occurring in connection with influenza. Rush seems to have been the first to mention this association in writing of the epidemic of 1790. "Several persons who were affected by it, had symptoms of madness, one of whom destroyed himself by jumping out of a window." A case of mania seen by Bonnet in 1837, and one of dementia reported by Crichton-Browne in 1874, complete the list. In contrast with this, reports of insanity in connection with the recent epidemic have been so numerous, that it must be looked upon as a pretty frequent complication. He tabulates 104 cases, 20 of which were observed in hospital, dispensary and private practice in Strassburg, and the remainder have been collected from medical periodicals, with brief histories of the Strassburg cases. The following are the principal results of his investigation:

In regard to the period at which the mental symptoms appear, the information is rather scanty, but it seems that it is most commonly during convalescence, although it may be the first indication of the attack of influenza. The male sex predominates, 58 out of 98 cases being males. The proportion of patients in the different periods of life seems to be about the same as in insanity from other causes. As to the form of insanity, he divides the cases into the three classes of acute delirium, delirium tremens and true psychoses. Of the first there were 28 cases, of the second 15, and of the third 58, of which 15 presented symptoms of mania and 38 of melancholia. Among the latter the hypochondriacal character predominated. Predisposing causes were found in 88 of the cases, including heredity, acquired predisposition, previous attacks of insanity and other nervous disorders, intemperance, complicating diseases, fright and anxiety. In many instances a combination of these influences existed; only 21 of the 104 could be attributed to the influenza alone. Two patients committed suicide and one homicide during the attack. Influenza occurring in the insane has almost uniformly an injurious influence on the course of the psychosis. The prognosis of insanity resulting from influenza is generally favorable.

History of Circumcision from the Earliest Times to the Present. Moral and Physical Reasons for its Performance, with a History of Eunuchism, Hermaphroditism, etc., and of the Different Operations Practiced upon the Prepuce. By P. C. REMONDINO, M. D. Philadelphia and London: F. A. Davis, Publisher, 1891.

The author of this volume, which is No. 11 of the Physicians' and Students' Ready Reference Series, exhibits in its 321 pages an amount of ability, research and labor that might have been devoted more profitably to a better cause. Not that we underrate the importance of circumcision as a surgical procedure, or deem it supererogatory to expatiate upon its benefits, but it scarcely seems justifiable in a scientific monograph to regale the reader with the smutty jokes which fill and mar this otherwise useful treatise. It is positively the most vulgar medical work we have ever seen.

Atlas of Clinical Medicine. By BYRON BRAMWELL, M. D., F. R. C. P., Edin., F. R. S., Edin., Assistant Physician to the Edinburgh Royal Infirmary, etc., etc. Vol. I, Part II. Edinburgh: Printed by T. & A. Constable at the University Press.

The second part of the first volume of this superb Atlas fully sustains the merit of its predecessor as well as the reputation of its author. It deals chiefly with Addison's Disease and Hodgkin's Disease. The text is full, and the former affection, being one to which Dr. Bramwell has devoted special study and laborious research, is treated most exhaustively. One cannot commend the colored plates too highly. Molluscum Fibrosum, Xeroderma Pigmentosum and Mania are also illustrated. The plate representing "Mania" is an excellent tinted crayon, and a fit companion to the other types of insanity that appeared in Part I. The Atlas is worthy a place in all asylum libraries.

Prichard and Symonds; in Special Relation to Mental Science; with Chapters on Moral Insanity. By D. HACK TUKE, M. D., LL. D.
London: T. & A. Churchill.

The profession will be greatly obliged to Dr. Tuke for this very interesting though moderate *brochure*, (116 pp. 8vo.) which, besides the papers on Dr. Prichard and Dr. Symonds, contains two more papers by the author, one read at the meeting of the British Medical Association at Belfast, in 1884, on "Moral Insanity," and the other at Cork in 1885, before the Medico Psychological Association on a "Case of Congenital Moral Defect." The discussions at the several meetings, of which the papers read were the text, are also given in full. It cannot be denied that Dr. Tuke has here furnished a substantial contribution to the study of a subject which has been and is of wide and discursive controversy; one upon which, as Cicero would say, "it is easier to find a beginning than an end of speaking"—we might perhaps add—on which it is easier to find plausible arguments than a definite scientific conclusion.

Whatever Dr. Tuke writes is always very readable, but he tells us that it was the circumstance of the Association meeting at Bristol that called out this tribute to the two eminent men whose names were associated with that place. It is not often the place of meeting adds so much zest to the subject of consideration; but in this case, the genial biographical touches excited as keen a relish as the evolution of the doctrines which these men were the first to suggest and formulate in some degree.

Dr. Prichard was well known in the scientific world for his extensive researches in ethnology and philology, and these certainly in no way detracted from the value of his studies in Nervous Diseases. Dr. Tuke believes that had he left either of these departments untouched he would still have gained the highest point in the one he might have chosen. Esquirol himself acknowledged his indebtedness to Dr. Prichard. Dr. Tuke exhibited at the meeting at which these memoirs were discussed, a letter addressed to his father by Dr. Prichard as long ago as 1834, in which he inquired whether the former had observed at the York Retreat any cases of *moral insanity*. "By that term," he explained, "I distinguish the mental state of persons who betray no *lesion of understanding*, or want of the power of reasoning and conversing correctly upon any subject whatever, whose disease consists in a *perverted state of the feelings, temper, inclinations, habits and conduct*."

Here, doubtless, the point of departure, which made Dr. Prichard's inquiry the starting point of a new doctrine, is the assumption that there may be insanity without any lesion of the understanding or the reason. Of course this doctrine was at the time a surprise to all specialists, and is not even yet accepted by all, notwithstanding what both Pinel and Esquirol had said about *manie sans délire*, or *raisonnante*. But this doctrine was followed up and strongly supported by Dr. Symonds, especially as he was led to investigate the subject more thoroughly in connection with the celebrated Townley murder trial. The following passage touchingly describes his conception of moral insanity, where he speaks of "the fate of those who are afflicted not with aberrations of judgment, which are detected by even the simplest of sound headed observers, but with marked obliquities of feeling which are so easily

confounded with bad passions *wilfully* indulged, and with evil habits *wilfully* pursued."

Dr. Symonds wrote some very able and suggestive papers on questions of psychology and physiology, such as involuntary muscular action, and reflex impulse of the cord and brain, though we do not understand him to connect these things with the question of moral insanity. Yet, hysterical action and the strange sympathy of imitation in what we might call an epidemic of suicides or motiveless crimes, without any epileptic neurosis, presents a difficult subject parallel to, but by no means to be confounded with, the special characters of moral insanity.

The truth is, that which has made definite conclusions so difficult to be reached on this whole subject, though science is supposed not to be deterred by consequences, or to take account where psychological dynamite may fall upon society, is the question of *responsibility*, and the obvious abuses that may creep in from this source to the administration of justice in our courts of law. Dr. Symonds thinks the medical expert has nothing to do with the question of responsibility, but that that is for the courts alone; the fact of sound or unsound mind alone is for the expert. Dr. Tuke, however, as well as Prof. Maudsley, who, himself a strong advocate of moral insanity, shows a little more heat toward lawyers and judges than one might expect to find in the "dry light" of science,* recommends extreme caution in the adjudication of these cases, to guard against the abuses to which this doctrine of moral insanity is manifestly liable. For our part, if the judges of our courts are to be called upon to distinguish between what are usually called insane people and cases of mere moral perversion, "without any lesion of reasoning faculties," we opine that they will be for compelling experts to take the responsibility of deciding the question of responsibility themselves, which is certainly as easy as it might be to say whether the criminal's will was concerned in his crime, or whether, as in the case of drunkenness, it was by his own fault, because from long inveterate habits of evil, both his will and conscience were paralyzed.

It is pleasant to read in these professional memoirs of Dr. Prichard and Dr. Symonds, that while they accepted the evolutionary hypothesis, they did not deem it, any more than Mr. Darwin did, as incompatible with the idea of a creator—an original personal creative force of the universe, as, according to the etymology of all languages, the only absolute *ENS*, out of which all phenomenal things are *ex-istences*—a conclusion to which the modern conceptions of the correlation and unity of all forces would seem to lead up. And, as Dr. Tuke says, they accepted the idea of a "*planning* creator," which implies, as Mr. Mivart has shown, a teleological evolution, which the mere materialist must deny, with Huxley and Haeckel. At any rate this element of personality adds that flavor of literary *humanism* to the abstract scientific character which puts it in touch with a world-wide sympathy and appreciation in the general mind.

As to Dr. Tuke's own paper on Moral Insanity, read at Belfast, it is an able excursus on the general subject, illustrated by several examples; and the particular "*Case of Congenital Moral Defect, with Commentary*," presented

* Responsibility in Mental Disease, p. 171.

at the Cork meeting, is certainly a very striking one, furnishing most of the elements on which a scientific diagnosis might be based, and is fairly entitled to be regarded as typical and crucial on this question until a still stricter analysis can be formulated.

Dr. Tuke says the "central idea and contention of his papers," that cases occur in which "the most important factor of the mental condition is, not loss of memory, not delusion or hallucination, not any deficiency of talent or genius, not any lack of mental acuteness, and certainly no incoherence of ideas or language, but a deficiency or impairment of moral feeling or self-control, such being either the development of a character natural to the individual (congenital) or a departure from it which contrasts most strikingly with its former traits." He does not think it very material whether we name it with Pinel, *manie sans délire*, or reasoning mania, or adopt Parigot's term *diastrephia*, or "perversion." And yet it helps to obscure a matter already obscure, that Westphal says he scarcely remembers a case of moral insanity which was not connected with epilepsy—either the latent diathesis, as is more common than generally supposed, or the phenomenon itself. Certainly his including cases of so-called "irresistible impulse" along with these that have a connection with latent epilepsy, looks very strongly to the temporary "removal of the inhibitory power of the higher centres;" but *query*, should they be comprised in the "class of affections which Prichard had in view?" It may be a question how far a "fixed idea" is to be taken as connoting a "disorder of the intelligence," but we should imagine it at least problematical whether fixed ideas may not generally be associated with the moral feelings that indicate what Dr. Tuke gives as a more correct definition of the unfortunate term moral insanity—that is, "rather a weakening of the higher centres involving paralysis of voluntary power, and so permitting an excessive and irregular display of feeling in one of the lower forms it assumes. This view, which transfers the seat of mischief from the feelings themselves to volitional or inhibitory power, might suggest the more accurate term of inhibitory insanity." (p. 22.) He adds that the higher levels of cerebral development concerned in the exercise of moral control, (as assumed by Jackson and Spencer,) are imperfectly evolved from birth, or have become diseased and more or less functionless, though intellectual functions are not seriously affected, but the emotional and automatic are left to fuller play than would be normal.

All this is "important if true"; and must be left to further psychological research and the judgment of specialists in cerebral study. In the discussions that ensued, it appears that the papers on the whole were well received. The Superintendent of the Broadmoor Criminal Asylum, whose experience would of course be looked to for much light on the subject, acquiesced in the general statements, but was not prepared in all cases to substitute treatment for punishment, though the latter doubtless had to be much modified in its character. He alluded to the diminution of the criminal occupants of prisons, with the corresponding increase in the population of asylums, as a consequence of the more humane views; but he cordially assented to a very incisive and suggestive remark of the President, (Dr. Yellowlees,) that as a matter of fact most of the cases of so-called moral depravity or confirmed moral insanity in the course of years deteriorate and sink into dementia at last.

Here is a fact of actual experience that throws grave suspicion upon the theory that the mental faculties of the man can remain unaffected or be free from incipient disease, while the personality of the individual is profoundly perverted in "the higher levels of cerebral development." The statement of Dr. Yellowlees is surely quite comprehensive, and may be taken as sufficient to include the mass of cases, even on Dr. Tuke's definition: "In the individual the perversion is usually congenital, or associated with arrested development." In the typical case of "congenital moral defect," commented on by Dr. Tuke with very clever use of his well known literary resources, and some illustrations from Herbert Spencer, on arrested evolution in the brain, leaving the intellect and moral nature independent of each for lack of "co-ordination," we cannot but regard it as a case of original (primary) moral imbecility, which might have been disciplined under ordinary family surroundings from the start, and as Dr. Rayner said, a whole life of "education in the *advantages* of moral insanity." Enough is not disclosed of the influences brought to bear upon him in his infancy. It would seem there were none that could have tended to develop personal affection for any one. He had little mental training and that only from a private tutor, (his father,) so that he acquired no sense of the social relations. His watching for opportunities to commit crime, as hiding for a passer by, and stealing the food of a patient, shows that he had a self-directing power, and his behavior under surveillance proves that he had a sense of consequences. The discussion on this case seems to have been little more than the relation of similar instances.

Dr. Tuke himself, in summing up, admitted that it was seldom indeed one could positively declare the total absence of intellectual disorder, but if any one held that the will itself is an intellectual function and the volitional power is wrecked with the moral sentiments, then *cadit questio*. W. T. G.

NOTES AND COMMENTS.

THE SHEPPARD ASYLUM, BALTIMORE, Md., is now open for the reception of patients.

MEDICAL EDUCATION IN THE AUSTRALASIAN COLONIES.—The regular correspondent of the JOURNAL OF INSANITY for the Australasian Colonies reports a highly satisfactory condition of affairs at the University of Sydney in respect to Psychological Medicine. All students in their last year in medicine are compelled to follow the systematic course of instruction in psychiatry, and to attend for clinical work at recognized hospitals for the insane. The standard of a recognized hospital is largely dependent upon the number of acute cases admitted and the mode of treatment adopted. The necessity for special knowledge was very apparent, few physicians having had the opportunity of acquiring any knowledge of insanity during their student training.

The University of Adelaide (South Australia) has a course similar to that at Sydney, both being compulsory for the degree of Bachelor of Medicine. The University of Melbourne makes psychiatry a compulsory subject for the higher degree of M. D. only—a plan involving the obvious objection that many men having obtained the M. B. do not proceed to the higher degree, and therefore miss special instruction in insanity. The course for the baccalaureate in medicine in the Australasian Colonies covers a period of five years, and the standard is high throughout.

SPECIAL PROVISION FOR EPILEPTICS.—The State Charities Aid Association of New York makes a strong plea for the passage of the Brown bill looking to the establishment of a special institution for the medical treatment, care, education and employment of epileptics. It appears from the Report of the State Board of Charities that there are in the county poor-houses and city alms-houses about five hundred epileptics, for whom there is no special medical treatment, little employment and no training or education. Such an institution as that con-

templated in the bill would undoubtedly prove a source of great benefit to this unfortunate class of sufferers, and it is thought that it would also be a source of economy to the State. Under appropriate treatment and education many dependent epileptics might recover, or at least become sufficiently restored in health to admit of their return to their families. It is also claimed that, under proper training, if means for employment were furnished, they might be rendered self-supporting, or partially so, while undergoing treatment in such an institution, and on leaving it earn their own livelihood. Furthermore, much could be expected in the way of distinct scientific gain from the facilities thus afforded for special study of the disease. There are epileptic colonies in successful operation in Germany, Holland, France and Switzerland, and in our own country the State of Ohio is entitled to the credit of having established the first public institution for the separate care of epileptics.

The suggestion of a separate institution for epileptics in this State is not new. Dr. John Ordronaux, the first Commissioner in Lunacy, repeatedly called the attention of the legislature to the special needs of this class. Year after year he pointed out, in his reports, the terrible effects of epilepsy upon the moral as well as intellectual character of its victims. No disease more surely saps the foundations of moral stability and intellectual growth, and one has but to analyze the cases admitted to the State Asylum for Insane Criminals, at Auburn, to realize very forcibly that the history of epilepsy is the history of violence, of crime, of homicide. It is rarely that one takes up a newspaper now-a-days without finding some account of violence done by a murderous madman, who, upon investigation, proves quite often to be an epileptic. It is high time, therefore, that society should protect itself against such assaults, and the most humane, as well as the most effectual means, of such self-defense lies in the protection of the victims of the disease themselves, by providing for them such special and separate shelter, care and custody as the Brown bill implies.

It is safe to say that this wise measure of relief will receive the hearty support of the State Commission in Lunacy and the State Board of Charities.

A CRISIS IN TEXAS.—During the last summer a water famine occurred at the North Texas Hospital at Terrell, following an unsuccessful attempt to procure water from a boring for an artesian well. The boring had reached a depth of over two thousand feet, the appropriation was expended, the pipes were dry, all resources had been apparently exhausted, and the authorities of the institution were overcome by consternation. The events of this critical period are thus feelingly portrayed by Dr. Preston, the superintendent: "The daily cry was 'water, water! No water to bathe the patients! No water to clean the wards! No water to wash the dishes!' etc., etc. It became unbearable. I thought of resigning my position. The Board of Managers began to get weak-kneed, and concluded they had a greater load than they could carry. Finally we consulted together, and concluded to bore for water ourselves. An old abandoned pump was resurrected and the engineers told to put it in working order, and to insert piping to a depth of 120 feet, where there was a tradition [*sic*] that there was an underground lake or river. (This was on the authority of Col. Jim Harris, who sold this valuable tract of land to the State.) The engineers demurred, and said they had tried that two years ago and failed."

Mindful, perhaps, of Ben. Butler's advice to Parnell, to "hang on!" Dr. Preston issued the order to "go ahead anyway." After a month of day and night work, and after "many failures, break-downs and disappointments," it was announced that water was at hand. "The problem was solved, and now there is a flow of 103,600 gallons per day."

The readers of the JOURNAL will unite with its editors in the hope that the spirits of the Texas Board of Managers may never again fail for want of water, and in congratulations to Dr. Preston upon the steadfast faith in Col. Jim Harris which brought a happy issue from affliction.

LUNACY AFFAIRS IN IRELAND.—The condition of lunacy affairs in Ireland is clearly set forth in recent reports of the Inspectors of Asylums, and of the Committee on Lunacy Administration appointed by the Lord Lieutenant. The number of patients under care on January 1, 1891, was 16,251, an increase of 225 during the year. In the decade from 1880 to

1890, the proportion of registered lunatics increased from 1 in every 401 to 1 in 289 of the estimated population of the country. This difference is attributed in part to the registration of lunatics who have been previously enumerated, though insane, with the general population, and in part to the decrease in population due to emigration. The refusal of other countries to admit defectives of any kind, leaves "an undue proportion of the infirm, the insane, the imbecile, the idiotic, the deaf mutes, and the blind, at home." It is estimated that if the population of 1890 equalled that of 1880, this apparent increase would have been reduced by two-thirds, leaving a still smaller proportion of recent cases. It is not strange that the impoverished and unsettled condition of the country, acting, as is suggested, upon the naturally impulsive and excitable temperament of the people, should be followed by an increased ratio of occurring insanity.

Attention is directed to the crude statutory provision for commitment of the insane, which results in the admission of seventy per cent as "dangerous lunatics, not because the patients are dangerous (for the number of really dangerous patients must be insignificant) but, first, because this order is mandatory, while under the other forms the patient may or may not be admitted, according to the will of the governors; secondly, under this form only are means provided for the conveyance of the lunatic to the asylum, as under it he becomes a criminal, and is taken charge of by the police (after being arrested), and, thereby, it alone provides for the payment of the medical officer who signs the certificate of insanity."

To meet the necessities of the constantly increasing class of chronic insane, and to relieve hospitals whose space is in demand for the treatment of acute cases, several plans are discussed by the Commissioners. Several work-houses are available, but the Commissioners wisely discountenanced their use, estimating the expense of necessary structural alterations as greater in the end than that of the construction of new and cheap but properly arranged buildings, to be annexed to existing district asylums. The Scottish boarding-out system is also favored for the harmless cases, twenty per cent of whom might be thus accommodated.

The Second Report on Lunacy Administration is made an

especially attractive document by an impartial and exhaustive discussion of the inquiry, "Whether any amendments of the lunacy laws are desirable as regards Ireland." It appears to the Commissioners that desirable changes are "so numerous and so radical," that a new general Act "dealing with all matters relating to lunacy," should be obtained, and their report in fulfillment of the spirit of the inquiry, outlines a new lunacy law, with explanation of what its "machinery and provisions" should be. The legislation proposed by the Commission treats at length of the personal rights and property of lunatics, and suggests a system of central control, based upon the experience of years with the operations of the English and Scotch statutes. The troublesome problems arising from the adjustment of the varied relations of Local Boards and the General Lunacy Commission are treated with great comprehensiveness. It is held that power should be given the Central Board to enforce observance of the requirements of law, but, though enforcing powers are desirable, they should not be too large. Upon this subject the comments of the Commission bear repetition: "It would be a mistake unduly to depreciate the value to such a board of some power to enforce its views and the provisions of the law it administers. The possession of such a power must often shape events where there is no resort to it—not even by allusion. A knowledge that such a board can in certain matters enforce what it recommends may occasionally prevent the birth of opposition. But such a power should not be largely given, and it certainly should not be largely used. There ought not to be much difficulty in leading a District Board to hold substantially the views of the General Board—the real object of both boards being the same. Where a difference occurs it does not follow that the General Board must be in the right. Indeed, neither board may be in the right, and the thing which is best to do may be learned by discussion. The irritation often raised by peremptory orders from a Central Board, which must be obeyed immediately and without question, should as far as possible be prevented."

The fairness shown in the above quotation reveals the tenor of the report. It is suggested that the outline of the law proposed by the commission would suffice, *mutatis mutandis*, for any government in need of complete lunacy legislation, and this

claim in behalf of the report is well sustained by its general excellence.

FIRE AT THE EASTERN MICHIGAN ASYLUM.—No asylum fire has threatened more serious consequences, and has been more happily free from personal injury and loss of life, than that which raged at the Asylum at Pontiac, Mich., on the 26th of December last. At about half-past ten o'clock flames were seen in one of the towers of the north wing, by Dr. Taylor, an assistant physician, who was on his way to the office upon the completion of his morning visit. In response to the alarm, the employes quickly organized, and two hundred patients, many violent and demented, were removed without accident or escape, from wards immediately threatened. As a precautionary measure other wards were emptied, and after the safe disposition of patients, "the work of fire-fighting began in earnest."

The following account of the progress of the fire and the incidents of the day is extracted from the *Detroit Tribune*:

Ladders were raised, the asylum fire engine got out and the battle began. The fire had broken through the scorched roof to the south of the tower where the flames were first seen, and a strong gale from the north-west spread the blaze toward the administration building. This was soon on fire and burned slowly but stubbornly. The Pontiac fire department was called for and responded immediately, and at the same time word was telegraphed to Detroit for an engine. On the arrival of the Pontiac department ten lines were pouring forth their streams, taxing to its utmost capacity the eight-inch main that supplied the asylum.

Brave work was being done, but it soon became evident that the flames were gaining headway.

At 1.20 P. M., aid arrived from Detroit, by a special train, having on board an engine and hose cart and six experienced firemen. This arrival did much to encourage the asylum and the Pontiac departments, and from all directions the streams were poured in upon the flames. The hydrant from which the asylum fire engine was drawing water soon burst, rendering the engine useless, as the other hydrants were too large. The only engine then working was the Detroit one, the other hose being attached to the hydrants, through which the water was forced by a pressure of 120 pounds at the waterworks.

Shortly after the arrival of the engine from Detroit it was seen that the administration building was beyond control, and attention was then turned toward saving the south wing, occupied by male patients. Two holes were hacked through the roof and streams of water turned in. This, with the fire-proof doors separating the wing from the center of the building and the change in the direction of the wind, saved the fire from spreading south, and no damage, except by water, was done to that wing.

On the north wing, the wind was in conjunction with the flames. The roof fell in and from hall 16, the upper flat, the fire burned through the floor to the next flat, hall 13. Every effort of the firemen working on this wing was directed to stopping the flames from entering halls 12, 15 and 18, and the north additional wing, and also to save, if possible, hall 10, which is situated immediately under hall 13. In their efforts to save the north additional wing they were successful, owing to the fact that fire-proof doors separated this from the original north wing.

At five o'clock the fire was so far under control that men were put to work replacing in the unburned portions the bedding and furniture which had been removed early in the day. And, though it was late at night before the water was entirely turned off, at 7.30 the fire was practically out.

Six wards were burned out, and after the fire all but nine of the forty-three wards were in suitable condition for occupancy. The walls were not seriously injured, and the fire touched the ground floor only in the administration building.

A meeting of the Trustees of the Asylum with Governor Winans was held on the following day, and it was decided to rebuild at once. The loss has been variously estimated from \$75,000 to \$150,000, and is not covered by insurance. The most plausible theory of the origin of the fire, proposed by Dr. Burr, and acquiesced in by his associates, is that the high wind started the dry dust in the attic, and that this dust was ignited by a spark from a short circuit of the telephone wires.

Modestly avoiding reference to his own tireless and unceasing energy, Dr. Burr writes to the JOURNAL: "The devotion, intelligence, enthusiasm and courage of the staff and corps of employés, averted loss of life or serious accident. The same qualities now uphold the administration and are rapidly bringing order out of chaos."

ANOTHER FATAL ASSAULT UPON AN ASYLUM PHYSICIAN.—It is but a short time ago that it became our melancholy duty to record the violent death of Dr. Lloyd at the hands of an ex-patient of the Kings County Asylum at Flatbush, N. Y. Now another name is added to the death-roll in the martyrdom of Dr. W. W. Reeves, Superintendent of the State Lunatic Asylum at Austin, Texas. In the absence of authentic details of the tragedy from other sources we print below the account given in the *New York World*, in its issue of December 30, 1891:

AUSTIN, TEX., Dec. 29.—Dr. W. W. Reeves, Superintendent of the State Asylum for the Insane, was shot and instantly killed to-day by Henry Purnell,

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son of ex-United States Marshal Thomas Purnell. The circumstances are almost precisely similar to those of the Lloyd-Dougherty tragedy in Brooklyn a few months ago.

The murderer has for about ten years shown signs of insanity, and more than once during that time he has been confined in the asylum. He was sent there about a year ago, and remained until about a month ago, when he was discharged, "cured." He has conducted himself quietly since, but it is known that he has during the past two weeks been making threats to kill certain prominent men who are now in Washington city.

This forenoon Purnell obtained a double-barrelled shotgun and carefully loaded both barrels with buckshot. He then took an electric car for the Insane Asylum, reaching there about 10 o'clock. Some photographers were in the yard, getting ready to take a picture of the building, and Purnell, knowing them, stopped for a moment and chatted pleasantly. He then proceeded to the main entrance of the building, where he met Dr. Reeves coming out. The doctor spoke kindly to him, and was descending the steps when Purnell raised his gun and emptied both barrels into the doctor's body. Dr. Reeves never spoke, but sank quietly to the ground and expired in a few moments.

Purnell took a cab and came back down-town and surrendered to the officers.

Dr. Reeves was born in Grayson County, Va., on June 23, 1847. His great grandfather was a captain under Col. Cleveland in the revolutionery war. His father was clerk of the Superior Court and afterwards sheriff of Grayson County, Va. Dr. Reeves' parents are still living in Jefferson, N. C. The doctor was graduated at the College of Physicians and Surgeons in Baltimore in 1878. In 1879, 1881 and 1886 he attended lectures at the University of Louisiana, New Orleans, and in 1888 the Polyclinic in New York city. He removed to Texas in 1870, and located at Willis Point, Van Zandt County.

His first marriage was to Miss Corda A. Hart, of Gilmer, Tex. His second wife was Miss Maggie Knotsch, of New Orleans. They have five living children. Dr. Reeves served the Confederacy in a North Carolina regiment. He was the Vice-President of the State Medical Association, ex-President of Van Zandt County Medical Association, permanent member of the American Medical Association, charter member of the Southern Association, and ex-President of the Board of Medical Examiners for the Seventh Judicial District. He was past master of Willis Point Lodge, No. 422, F. and A. M.; past high priest of Willis Point Chapter, No. 102, R. A. M.; a member of Dallas Commandery, No. 6, Knights Templar, and past deputy grand master for the Twenty-second and Twenty-sixth Districts, I. O. O. F.

THE ALVARENGA PRIZE.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1892. Essays intended for competition may be upon any subject in Medicine, and must be received by the Secretary of the College on or before May 1, 1892. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College.

HALF-YEARLY SUMMARY.

ILLINOIS.—The Hospital at Kankakee has recently had a valuable and rather unusual present in a collection of seventy-eight pictures by the celebrated artist G. P. A. Healy, presented by himself. They include copies of several of his best known pictures, among them full-sized portraits of various American and European celebrities, besides a large number of landscapes and figure pieces and sketches.

—The opening of the new annex building of the Illinois Central Hospital occurred on August 17th. On that date the first transfer of patients from other institutions was made, to comply with the redistricting of the State, as ordered by the last Legislature. The new building, known as Annex South, is specially designed to accommodate male patients, while the Annex North, (opened in 1885, and used until August last for both male and female patients,) is now occupied by female patients only. Each building has accommodations for 300 patients. The female department is in charge of Dr. F. C. Winslow; at the male department is Dr. F. P. Norbury.

The new amusement and chapel building, which is situated between the male and female departments, will be opened soon. It is fifty by ninety feet, including the stage, has seating capacity for five hundred and thirty persons. It is artistically decorated; incandescent electric lights entering largely into the effects produced. The stage and fixtures are modern in arrangement. It is seated with portable opera chairs, and provided with a grand pipe organ, built at a cost of \$2,500 by Johnson & Sons, of Westfield, Mass. The Board of Trustees are justly proud of this building, for after erecting a handsome and substantial asylum building, they had money enough left, out of the original appropriation of \$120,000, to build this hall, furnish it as above stated and still have \$2,200 to revert to the State Treasury.

The institution is soon to be lighted throughout by incandescent electric lights, the contract having been recently let to the Western Electric Company of Chicago.

Further improvements about the institution during the past year have been the addition of a slaughter-house, a new store building, a dynamo-room, the laying of 2,000 lineal feet of sandstone walk, six feet wide, extending from the main building to the street and to the annex buildings, and the grading of the lawn and laying out of new walks, roads, &c.

INDIANA.—The Hospital at Evansville now accommodates 382 patients. A large store-house has been erected, and there has been rapid progress in improvement of the grounds and in interior furnishing.

IOWA.—Dr. Gershom H. Hill, Superintendent of the Hospital at Independence, takes an active part in a general effort to inaugurate a settled policy of State care during the coming biennial session of the State Legislature.

Upon this subject Dr. Hill sends the following communication to the JOURNAL:

"The superintendents of the hospitals in this State are all firmly in accord with the policy of the State of New York in caring for all the insane who need public care in State institutions; but Iowa, like other States, finds it difficult to increase the capacity of her State institutions fast enough to accommodate all the insane, therefore when our wards become crowded, according to law, the trustees, on the recommendation of the superintendent, discharge certain 'old settlers,' as harmless and incurable, to be removed by the county authorities and cared for by their friends, or in the county poor-houses. A number of the ninety-nine counties in Iowa have separate buildings on their farms for the insane, but they are hardly worthy of the names of county asylums, and I have always discouraged the erection of such structures by county authorities. We have no State Board of Charities in Iowa. The only substitute for it is a Visiting Committee composed of three persons; two men and one woman. Dr. F. McClelland and the lady member are physicians. They are appointed by the Governor, and serve during good behavior. It is their duty to visit the State hospitals for the insane once a month in order to ascertain if the patients are properly cared for, and to look out for their interests. They do not visit any other State institutions, and they have no authority, and can receive no compensation for visiting county institutions."

KANSAS.—At the State Asylum at Osawatomic, a detached building for men, with capacity of three hundred, is in process of construction, and is expected to be ready for occupancy on the 1st of June next. The basement story contains kitchen, scullery, pantries, cooling-rooms, store-rooms and general dining-room. The first floor is divided into four wards, all day-rooms; the two stories above are associate dormitories, with attendants' room and two emergency rooms in each section or ward. Bath and clothing rooms, closets, etc., are on each floor. The census of the institution is 510.

Dr. A. H. Knapp has presented his resignation as superintendent, to take effect June 30th, 1892.

MASSACHUSETTS.—The annual exercises of the Westborough Training School for Nurses, connected with the Westborough Insane Hospital, took place Wednesday evening, November 4th. At this time the first class of seven nurses were graduated, after completing the required two years' course. Both men and women composed the class.

During their course, a few lectures were given, but most of the instruction was derived from text-books. The first year they completed "How to Care for the Insane," by Dr. Granger, and a "Manual of Nursing," prepared for the Bellevue Hospital Training School; and in the senior year the female nurses finished the book of Dr. Worcester entitled "Monthly Nursing." Nearly all received experience out of the hospital in private cases. All of the female nurses have had experience in monthly nursing and a regular three months' course in a surgical hospital, whereby they are fitted not only for caring for the insane, but for surgical and obstetric cases, as well as for the

ordinary diseases as they occur in the community. During the past year all persons entering the hospital to have charge of the insane are called nurses, and are obliged to join the Training School. At first there was some difficulty in changing the former methods, but now the nurses are enthusiastic, and are doing good work, and they are incited to make progress by the openings constantly occurring for nurses in the community at higher wages than could be paid in the hospital. Previous to November, nurses were given whatever they earned in private cases, but since November they have been paid by the Training School the same wages that would be given if in the hospital service, with an addition of one-half of the surplus of the wages paid by the family, the other half going to the Training School for the expense of training nurses in cooking, massage, &c. The wages of nurses remain the same as before the Training School was begun, and of course are about the same rate as other hospitals in the State.

—Extensive improvements have been made in that part of the Worcester Insane Asylum rebuilt after the fire of 1890. A high pressure water main has been extended so that a hose may be readily laid to protect any portion of the buildings. One or two more hydrants will be placed, and stand-pipes will be carried up inside the house. Outside fire-escapes have been added, and inside stairways, so that now no ward has less than two means of communication with the ground.

—Riverview, at Baldwinsville, Mass., has been enlarged during the past summer to a capacity of eighteen patients. A complete equipment for the administration of Turkish, Russian, electrical and other baths has also been added.

MICHIGAN.—The last Legislature authorized Wayne County to care for its pauper insane in an asylum of its own use. As in the case of the State institutions, the cost of their maintenance, after two years' treatment at county expense, is to be assumed by the State. Two years ago a similar bill failed to pass, and at that time a large number of patients were sent to the Eastern Michigan Asylum at Pontiac. The resulting overcrowded condition of that institution has been in a measure relieved during the past summer by returning these patients to the Wayne County Asylum.

This step is to be regretted in view of the attitude which the State has for many years maintained in favor of State care for the insane, but the overcrowded condition of State asylums made the necessity for relief urgent.

—Appropriations were made by the last legislature for a new colony house for male patients at Kalamazoo, a cottage for female patients at Traverse City, and to purchase additional land at Pontiac. The institution at the latter place was also authorized to build an infirmary.

—A training school for attendants has been in successful operation at the Eastern Michigan Asylum since September, 1890. The members have shown a deep interest in the studies pursued, and the improvement in efficiency and ability to care intelligently for patients has been marked. The first class will graduate next March.

—Dr. W. C. Pepper, formerly assistant physician at the Eastern Michigan Asylum at Pontiac, died at his father's home in Jerseyville, Ontario, October 1, 1891.

MINNESOTA.—All the hospitals are overcrowded, with the prospect of some relief when the buildings now in process of construction at Fergus Falls are completed; that will be some time in 1892. It has been suggested that the buildings lately occupied by the Reform School, now empty, the occupants having been transferred to their new quarters in Red Wing, be furnished and used temporarily for the insane. The subject was considered by the Governor, who decided that the plan was not practicable. The buildings are located in St. Paul, and could be made comfortable for the surplus now accommodated at the Hospital at St. Peter, probably without much expense for repairs; but there may be objections in law.

MISSISSIPPI.—Seventy-nine colored patients have been transferred from the East Mississippi Asylum at Meridian to the Asylum at Jackson. The latter institution has an annex for colored patients, which now accommodates nearly two hundred of their race.

NEW JERSEY.—The resignation of Dr. H. C. Harris, Medical Director of the State Asylum at Morris Plains has been forwarded to the Board of Managers. Dr. Harris states that this step has been necessitated by the appointment of a partisan board by Governor Abbett.

NEW YORK.—At the eighth annual meeting of the New York State Medical Association, held in New York city, October 28, 29 and 30, 1891, Dr. Judson B. Andrews was elected President of the Association for the ensuing year. A part of the session was devoted to discussion of the ætiology of insanity, which had been arranged by Dr. Andrews as follows:

Heredity and Environment, by Dr. Andrews; Traumatism and Shock, by Dr. Henry M. Hurd; Arrest of Development and Diseases of Infancy, Dr. E. N. Brush; Bodily Diseases and Senility, Dr. P. M. Wise; Syphilis and Intemperance, Dr. G. A. Blumer; Causes of Insanity Peculiar to Women, Dr. W. D. Granger.

—About 1,350 insane still remain under county care. They will be removed to State hospitals as soon as the detached buildings for which an appropriation was made by the last Legislature, are completed. It is thought that extra accommodations for all but about 400 of the insane remaining in the county houses will be available about May 1, 1892.

—The number of patients in the Buffalo State Hospital is larger than ever before reported, there being 613 now in the house. To accommodate them it has been necessary to put up a number of beds in the corridors and extensions. An orchestra of nine pieces has been organized, which furnishes music for the regular dances.

The steward of the hospital, Mr. Levi M. Beam, died on the 12th of Sep-

tember, after a short illness. He had served the institution faithfully since its opening, eleven years ago. His place is filled by Thomas Wilding, who is now acting steward.

The Board of Managers has decided to ask the Legislature for appropriations to erect another building in continuance of the original plan.

The annual report shows that the percentage of recoveries for the year was 25.34; that the whole number of patients under treatment was 904—a creditable showing in view of the number of cases transferred from the county institutions.

—The St. Lawrence State Hospital has made progress in construction, by the enclosure of group number three—a compact group of buildings for the care of 400 women patients, 50 attendants, two physicians with the necessary domestic arrangements, and an associate dining hall for the entire group. The buildings are erected with blue limestone outer walls, brick-lined, and with double sash windows throughout. They are quite solidly connected by closed corridors, so that a casual observer might consider “block” a better designation than “group.” There is, however, as much opportunity for segregation, as if the several buildings were entirely separated; and the advantage of warmed connection between the several buildings in a cold climate is sufficiently great to overcome any objection that has yet been raised against it. The chief departure in the present from conventional arrangements of wards, is the separate wings for water-closets, lavatories and bath-rooms. These are arranged to accommodate three wards each, and are equally convenient to each. They will thus become of sufficient importance to be constantly attended, an advantage that will be obvious to the medical officer who has wrestled with the closet problem and has been defeated. Although this building is constructed with double outer walls, double sash and corresponding solidity in other parts, of the best known building materials, its cost will be only \$550 per capita for the number of persons accommodated, after it is completed ready for furniture; in fact contracts for enclosure of the building have been less than the estimates, which would reduce this amount.

The central hospital group has been organized, and its operative plant as well as the reception cottage for each sex is now in active operation. The observation cottages are ready for furniture and will be occupied in several months. Although the opportunities for classification are still restricted for lack of ward division, this hospital may be considered, in other respects, full-fledged and doing its legitimate work.

—The new cottage of the Binghamton State Hospital, for thirty-five women, at Phelps farm is nearly completed. It will probably be occupied in a few weeks.

The work on new south building is progressing rapidly. It will be ready for occupancy early in May.

All the cottages both at the main plant and at the two farms are now connected with the main office by a telephone system.

—Dr. Frederick Sefton, who, for nearly six years, has been first assistant physician at the New York State Asylum for Insane Criminals, at Auburn, has resigned and will open a private institution for the care of nervous and

mental diseases in that city. He has purchased a very desirable property containing a homestead and twenty acres of land, most eligibly and conveniently located, and has remodeled the residence, and improved the grounds. The new institution, which will be known as "the Pines," will accommodate eight patients of either sex, and is now completely furnished and will be ready for the reception of patients early in the spring.

—The Summary records with sorrow the death of Dr. B. Wible Walker, formerly assistant physician at the Willard State Hospital. Dr. Walker entered the State service at Willard, after a preliminary period of training in the New York city institutions and in the Bloomingdale Asylum. Ambitious for promotion in his chosen specialty, his sunny disposition won him many friends, and his energy and devotion to work placed him among the first of the younger men—and assured him the success he desired to achieve. Failing health necessitated his resignation, and he died at Panama, Central America, of septicæmia, July 10, 1891.

—A new group of buildings, destined to accommodate 200 patients, is in course of erection at Utica as an annex to the male department of the main building, in pursuance of the State Care Act. Ground was broken in August, and the buildings are now all under cover. The group comprises a central building for residential and administrative purposes, about which are symmetrically disposed, and connected by corridors, a congregate dining-room, one and a half stories high, with kitchen adjoining; two infirmaries, two stories high; two spacious day-rooms, and two congregate dormitories, each one story. Single rooms line one side of the connecting corridors. It is expected that this addition will be ready for occupancy next summer, and that the total per capita cost will be a trifle under \$550.00, including separate heating and electric light plants and furniture.

OHIO.—The Legislature will be asked to make appropriations for small workshops for the employment of patients in the Asylum at Cleveland. The question of employment has enlisted the attention of the newly appointed Superintendent, Dr. Eyman, who will make an effort to provide every proper means for the industrial diversion of his patients.

PENNSYLVANIA.—At the State Hospital at Norristown "the utility of the inspectory system has been demonstrated in many ways during the year, and as time passes it becomes more and more engrafted upon the ward life as a necessary safeguard to the comfort and protection of the patients. * * * Necessarily in a large degree, the best results of the system are of a negative rather than a positive character; from the fact that the theory has been practically realized, that its chief element for good lies not in its detection, (however important that may be,) but rather in its prevention features—the mere presence of the inspectors undoubtedly checks, in many instances, sudden impulses, under trials of patience, and constantly restrains the tendencies toward wrong-doing among the subordinates."—*Annual Report for 1891*.

—The Christmas Circular of the Pennsylvania Training School for Feeble-Minded Children, states: "The annual issue of this circular gives an oppor-

tunity to many of our old and new friends to encourage our work through small and timely contributions for the enjoyment of the children, or for special means for their improvement. So generous in recent years have been these contributions that a portion is now annually added to the free fund, which to-day supports sixteen children, all of whom are either fatherless or entire orphans, who without this beneficent provision would be thrown upon mothers struggling to support themselves and their other dependent children, or who might be cast into alms-houses, where their helplessness and sensitiveness could be but sadly administered to.

"Poor Joe, who has for many years derived his support from this source, continues with us. Although dependent on the generous boys of Franklin club to be carried from place to place, he never escapes any of the privileges which come to the boys of sound limbs and usual strength; Joe has nevertheless become quite helpful in teaching the younger boys the art of mat making. He is fully conscious of the benefits he receives from our free fund, and is as loyal in returning what little service he can by the industrious use of his crippled hands.

"Within a few days a distressed widow brought to our doors an entirely helpless child seven years old. She had recently lost her husband, and was entirely dependent on the work of her own hands for the support of this little excitable idiot and another and younger child. Her condition was very necessitous, as the care of the former had become so serious as to demand that she should give up her employment in the mill, and she shrank with a proper sensitiveness from becoming a pauper. The free fund took the little idiot child and released a grateful mother to return to her loom, and to continue her little home and independent sustenance of her remaining child.

"There are many mothers equally necessitous and deserving for whom provision is being urged. So far as by influence or act you can add to this fund, you will alleviate the condition of those who are infirm through no sin of their own, and who are too often the cross bearers of the sins of the great community. Let us for this and for Christ's own blessed teachings, nurture and help them.

"The holidays are as eagerly anticipated in this hospital home as in any happy home in the land. We never disappoint these hopes. We are glad to be assisted by those who are interested and able."

SOUTH CAROLINA.—The State Asylum at Columbia accommodates about 750 patients—white and colored. The number of insane among the colored people is increasing rapidly, and out of proportion to the whites. The former Superintendent, Dr. Griffin, was removed through no fault of his, by the Governor, May 21st, 1891. In July Dr. J. W. Babcock was appointed and assumed control August 15, 1891. Dr. Babcock served as assistant to Dr. Cowles at the McLean Asylum for about seven years before his appointment as superintendent. Although there has been a change of superintendents there has been no marked change of policy or management. The only effect upon the asylum of the political upheaval, has been a cutting down of the usual annual appropriation for maintenance, from \$100,000 to \$90,000, and the withholding of an amount asked for to provide better accommodation for the colored.

male insane. The evil effect of politics upon such institutions is brought prominently to attention when it is noted that this lack of justice and benevolence can be charged to a member of the Senate (and a medical man,) who has Congressional aspirations. The Training School for nurses will be inaugurated on the 4th of January. Miss Katherine Guion, a graduate of McLean Asylum Training School and also of the Massachusetts General Hospital, will have charge as Superintendent of nurses. A healthy degree of enthusiasm exists, and about twenty nurses will begin the course of instruction. The classes will be open to men and women.

TEXAS.—The library continues to be a feature of the North Texas Hospital, at Terrell. A librarian is in charge, and reports a gratifying number of contributions from friends of the institution, and from publishing houses. Additions have also been made by appropriations by the legislature.

Reduction of restraint, removal of fences, and precautions against fire are among the recent advances made by the hospital.

VERMONT.—The new Asylum at Waterbury received patients on the 8th of August, and now accommodates two hundred of both sexes. About one-third of the institution, as planned, is at present constructed. The transfer of patients from the asylum at Brattleboro has relieved the latter institution, which, for the first time in half a century, is free from pressure.

VIRGINIA.—The Superintendents in this State make unanimous request for change of title from Lunatic Asylums to Hospitals.

WASHINGTON.—A new wing has been added to the male ward of the Western Washington Hospital for the Insane, at Fort Steilacoom, and is about ready for patients. It is three stories high, built of brick, heated with steam, lighted with electricity, and supplied with hot and cold water. Each floor has twenty-eight rooms for patients, and each room is large enough for two patients. This new wing will take the place of the last of the old wooden buildings which have served so long as hospital wards. They were barracks for soldiers, built in 1857, and have been used for the insane since 1871. They will now be placed on the retired list. Other improvements have also been made since our last report. Two new boilers have been added, the boiler-house and laundry enlarged, an engine for running the laundry, an additional washer and other laundry machinery added; also a large dynamo, and a new smokestack. The water supply has been largely increased by a steam pump, and tower with tanks at the spring from which the water is obtained. The hospital is also well supplied with fire mains and hydrants, and a well equipped fire department.

WISCONSIN.—By act of the legislature, the Asylum at Milwaukee is now entitled the Milwaukee Hospital for the Insane. The services of eight physicians have been secured for consultation, and they are known as the Consulting Board.

Turkish baths have been found to have a calmativè effect upon noisy, excitable cases, notably epileptics, and have been useful in the treatment of recent cases, more particularly those of depressed type.

Fire protection has been augmented by the adoption of electric door-openers.

CANADA.—A monthly magazine, *The Lancaster Argus*, is issued by the patients of the Asylum at St. John, N. B.

—Rev. Sister Therese, the Superioress of the Sisters of Providence in charge of the Asylum of St. Jean de Dieu, Longue Pointe, Quebec, died November 22, 1891, aged seventy-one years. Her name was Tetu. She entered orders in 1844, and eleven years later she founded a house in Valparaiso, Chili. In 1857 she visited San Francisco. Later she became Superioress of an asylum in Burlington, Vt. She founded the Longue Pointe Asylum in 1875, and rapidly acquired property valued at \$1,000,000. Her health suffered greatly in consequence of the fire at the asylum in the Spring of 1890, when ninety-four patients lost their lives, and she had been failing ever since.

EUROPE.—Consul Isaac R. Diller (*Reports from the Consuls of the United States, No. 128, May, 1891.*) reports the erection of a commodious building for the Lunatic Hospital San Bonifazio, at Florence, Italy, by the generosity of Mr. E. P. Fabbri, an American citizen.

APPOINTMENTS AND RESIGNATIONS.

- ADAMS, CHANCEY, appointed Assistant Physician of the Taunton Lunatic Hospital, Taunton, Mass.
- BABCOCK, JAMES W., formerly Assistant Physician at the McLean Asylum, Somerville, Mass., appointed Superintendent of the South Carolina Lunatic Asylum, Columbia, S. C.
- BANCROFT, GEORGE A., resigned as Assistant Physician of the Taunton, Lunatic Hospital, Taunton, Mass.
- BARBOUR, PHILIP F., resigned as Second Assistant Physician of the Eastern Kentucky Lunatic Asylum, Lexington, Ky.
- BROWN, J. R., resigned as Assistant Physician of the Eastern Hospital for Insane, Knoxville, Tenn.
- COLLIER, ARTHUR M., appointed Assistant Physician at the Binghamton State Hospital, Binghamton, N. Y.
- COURTNEY, J. ELVIN, formerly Third Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y., appointed First Assistant Physician at the State Asylum for Insane Criminals, Auburn, N. Y.
- CURRIE, THOMAS J., appointed Assistant Physician at the Willard State Hospital, Willard, N. Y.
- EYMAN, H. C., formerly Assistant Physician at the State Asylum, Athens, O., appointed Superintendent of the Cleveland Asylum, Cleveland, O.
- FROST, HENRY P., appointed Assistant Physician at the Willard State Hospital, Willard, N. Y.
- FULLER, DANIEL H., appointed Assistant Physician at the McLean Asylum, Somerville, Mass.
- GERHARDT, J. Z., resigned Superintendency of the State Lunatic Hospital Harrisburg, Penn.
- GREEN, EDWARD M., appointed Second Assistant Physician at the Eastern Kentucky Lunatic Asylum, Lexington, Ky.
- GRIFFIN, P. E., resigned Superintendency of South Carolina Lunatic Asylum, Columbia, S. C.
- GUILLOT, H. C., appointed Assistant Physician at the Eastern Michigan Asylum, Pontiac, Mich.
- HARLOW, J. L., resigned as Assistant Physician of the Northern Michigan Asylum, Traverse City, Mich.
- HARRIS, H. C., resigned as Medical Director of the State Asylum for the Insane at Morris Plains, N. J.
- HARRIS, ISHAM G., appointed Fifth Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y.
- HOONANIAN, GREGORY H., appointed Second Assistant Physician, Male Department, State Hospital for the Insane, Norristown, Penn.
- IVEY, W. P., resigned as Assistant Physician of the North Carolina State Hospital, Morganton, N. C.
- JAMES, J. H., resigned as Assistant Physician of the Minnesota Hospital for the Insane, St. Peter, Minn.

- KELLOGG, THEODORE H., formerly First Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y., appointed Resident Physician, Sandford Hall, Flushing, N. Y.
- KINDRED, J. J., formerly Fourth Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y., appointed First Assistant Physician at the State Hospital for Insane, Harrisburg, Penn.
- KNAPP, A. H., resigned Superintendency of the State Insane Asylum, Osawatomie, Kas.
- LAWRENCE, O. P., appointed Assistant Physician at the Eastern Hospital for Insane, Knoxville, Tenn.
- LOTHROP, HARRIET E., appointed Pathologist at the State Hospital for the Insane, Norristown, Penn.
- MCQUADE, F. Q., resigned as Second Assistant Physician, Female Department, State Hospital for the Insane, Norristown, Penn.
- ORTH, H. L., appointed Superintendent of the State Lunatic Hospital, Harrisburg, Penn.
- PAGE, HARTSTEIN, appointed Assistant Physician at the Worcester Insane Asylum, Worcester, Mass.
- PARSONS, RALPH W., promoted to be Fourth Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y.
- QUIMBY, H. M., formerly Superintendent of the Worcester Insane Asylum, appointed Superintendent of the Worcester Lunatic Hospital, Worcester, Mass.
- REESE, D. MEREDITH, appointed Assistant Physician at the Sheppard Asylum, Towson, Md.
- ROBINS, WM. L., resigned as Assistant Physician of the Maryland Hospital for the Insane, Catonsville, Md.
- ROCKWELL, M., appointed Assistant Physician at the Northern Michigan Asylum, Traverse City, Mich.
- RODGERS, HARRIS G., resigned as Assistant Physician of the Binghamton State Hospital, Binghamton, N. Y.
- RODGERS, ALICE, resigned as Assistant Physician of the Taunton Lunatic Hospital, Taunton, Mass.
- ROHE, GEORGE H., appointed Superintendent of the Maryland Hospital for the Insane, Catonsville, Md.
- ROWLEY, A. S., appointed Assistant Physician at the Northern Michigan Asylum, Traverse City, Mich.
- RUSSELL, SELWYN A., formerly Assistant Physician at the Utica State Hospital, Utica, N. Y., appointed First Assistant Physician at the Hudson River State Hospital, Poughkeepsie, N. Y.
- SAVAGE, T. R., resigned as Assistant Superintendent of the Michigan Asylum, Kalamazoo, Mich.
- SCOVEL, ASHLEY, formerly Assistant Physician, New York City Asylum, Ward's Island, appointed First Assistant Physician at the Vermont State Asylum for the Insane, Waterbury, Vt.
- SCRIBNER, ERNEST V., promoted to be Superintendent of the Worcester Insane Asylum, Worcester, Mass.

- SHIMES, ADA M., appointed Assistant Physician at the Taunton Lunatic Hospital, Taunton, Mass.
- SIDEBOTHAM, HENRY L., resigned as Second Assistant Physician, Male Department, State Hospital for the Insane, Norristown, Penn.
- STONE, W. A., formerly Assistant Physician at the Northern Michigan Asylum, Traverse City, Mich., appointed Assistant Physician at the Michigan Asylum, Kalamazoo, Mich.
- TOMLINSON, H. A., formerly Assistant Physician at the Friends' Asylum, Frankford, Penn., appointed Assistant Physician at the Minnesota Hospital for Insane, St. Peter, Minn.
- WADE, J. PERCY, appointed Assistant Physician at the Maryland Hospital for the Insane, Catonsville, Md.
- WARREN, W., formerly Assistant Physician at the Michigan Asylum, Kalamazoo, Mich., appointed Assistant Physician at the new private asylum, Oak Grove, Mich.
- WELSH, LILIAN, appointed Second Assistant Physician, Female Department, State Hospital for the Insane, Norristown, Penn.
- WILSEY, O. J., formerly Second Assistant Physician at the Binghamton State Hospital, Binghamton, N. Y., appointed Resident Physician at the Long Island Home, Amityville, N. Y.
- WHITE, FRANK S., appointed Superintendent of the State Lunatic Asylum, Austin, Tex.

OBITUARY.

E. T. WILKINS, M. D.

Dr. Edmund Taylor, Wilkins,* who fell a victim to influenza, February 10, 1891, was born in Montgomery County, Tennessee, October 20, 1824, and was the son of Dr. Benjamin and Jane Taylor Wilkins.

He received his collegiate education at that most ancient, with one exception, of American literary institutions, the old William and Mary College, founded in 1692, and located at Williamsburg, the early capital of the Commonwealth of Virginia, and from which he graduated in 1844. After leaving college, the object of this sketch turned his attention to the cultivation of the soil, and was for several years engaged in raising cotton in the States of Mississippi and Louisiana, and afterwards conducted a sugar plantation at New Iberia in the latter State.

Like many another enterprising spirit of that day, he soon became deeply impressed by the glowing accounts and excitement consequent upon the discovery of gold in California, and in March, 1849, took passage on the schooner *St. Mary*, from New York, for the Pacific Coast, by way of Cape Horn.

After a most tedious voyage, filled with irritating delays and great peril, and extending over a period of nearly a year, the small craft on which he sailed cast anchor in the bay of San Francisco.

Dr. Wilkins made a short stay in San Francisco—then a village of rude huts, constructed of rough boards and canvas, but now a beautiful young city of three hundred thousand population and magnificent prospects—providing himself with the proper tools, provisions, etc., necessary for life and labor as a miner in the far interior mountains, which he reached in the spring of 1850.

His first effort at mining, and it seems his last as well, was in the attempt to turn the Trinity River from its course by means of a dam, constructed of sand-bags. This proved unsuccessful,

* Read by Dr. L. F. Dozier, of the Napa State Asylum, at the meeting of the Association of Medical Superintendents of American Institutions for the Insane at Washington, May, 1891. For portrait see frontispiece.

and having spent the summer, and all his available means, in this fruitless effort to compel the river to "give up its hidden treasure," he abandoned the mines and the occupation of mining forever.

In 1853 he returned to his native State and attended one course of medical lectures at the Memphis Medical College, after which he sold his sugar plantation in Louisiana, and returning to California in 1854, purchased land in Yuba County, near the town of Marysville, and again turned his attention to farming. In 1855, he married Miss Matilda P. Brander, of Virginia, who bore him three children, and died in 1867. He was married a second time, to Miss Camilla Price, of Missouri, in 1877, who also died, in 1889, without issue.

Finding farming unprofitable, Dr. Wilkins concluded to adopt medicine as his life's work, and taking a second course in the Memphis Medical College, graduated and took his degree from that institution in 1861. On receiving his diploma and returning to California, he left his farm and made his residence in Marysville, then the most flourishing inland town of the State, and devoted himself entirely to the study and practice of his profession, and in the course of his reading gave some special attention to the subject of insanity.

The Legislature of 1870, having authorized the Governor to appoint a Commissioner to compile all accessible information as to the construction and management of asylums, and the different modes of treating the insane, Dr. Wilkins was chosen for that important mission, and entered at once upon its execution. He visited some fifty of the principal institutions in the United States and Canada, then crossing the Atlantic, spent the greater portion of two years in travel, and inspected during that time about one hundred asylums in Great Britain and on the continent of Europe. The results of this mission are embodied in his report, made to the Executive Department upon his return to California, which was published in book form, and distributed to the various organizations of public charity, and to many individuals in the different States in the Union, because of the many valuable charts contained in it, giving the plans and specifications of the best asylum buildings then in existence, or being constructed, and other important information gathered by his interviews with the more distinguished alienists of

European nations, as well as those of our own country, as to the various methods of treating and managing the insane.

It was but natural, in view of the experiences and observations of his late mission, that Dr. Wilkins should be selected as one of the Commission to locate a site and adopt plans for an additional asylum, provided for by the Legislature of 1872, and in the following year, with his confrères of the board, located the "Napa State Asylum for the Insane."

Being the moving spirit in this matter, his excellent judgment and good taste are alike manifest, for in all the essentials necessary and most desirable for an institution of the kind, it has no superior, if indeed an equal, in the world—beauty of scenery, combining mountain and valley; its accessibility both by rail and water transportation, and convenient proximity to the flourishing town of Napa; salubrity and delightful characteristics of climate; purity and abundance of water supply, furnished from mountain streams, through permanent works and by gravitation entirely; exceptional and almost perfect natural facilities for sewerage and ventilation; while for grace of outline, convenience and solidity of construction and ornate finish, the building itself is a model of mechanical skill and architectural design.

Dr. Wilkins was elected Resident Physician of the Napa Asylum in March, 1876, and had he lived five years longer, would have completed his fifteenth year as its superintendent. Having been so conspicuously and intimately connected with the projection of this institution, the selection of the site, the adoption of plans for building, and all the preliminaries for its completion, it became at once his pride and special pet, and he entered upon the administration of its affairs with a feeling of parental affection. With a zeal and enthusiasm which seemed untiring, he bent his efforts to develop its material resources and add to the rare beauty of its natural surroundings, by embellishing its grounds in calling to his aid the best skill of the landscape gardener. And to-day the grand pile, erected at a cost of a million and a half dollars; with its valuable appurtenances of extensive and permanent water works; of fields for grain; of ample pasturage, made perpetual by a system of irrigation; of extensive orchards and vineyards, and abundant acreage for the growing of vegetables; with its magnificent

avenue of approach, more than a quarter of a mile in length and one hundred feet in width, bordered by tall trees, flowering shrubs and variegated plants, and flanked on either side by a graveled walk, arched by an unbroken vista of lapping boughs; with its immediate environments of drive-ways, of winding walks, of grassy lawns, of brilliant flower beds, of sheltering arbors and cosy retreats; and all shaded and protected by splendid trees; this magnificent property stands at once an enduring monument to the generous charity of the State of California and the untiring labor and fertile brain of Dr. Edmund T. Wilkins.

As a man, his many good deeds, his noble, manly virtues, his pure and unostentatious life, combined to make him many friends and to endear him to all.

As a citizen, he was broad in his views and full of enterprise, always alive and progressive, and ready to counsel and assist in all that was calculated to advance the material prosperity and moral happiness of the community in which he lived. As a philanthropist, his sympathies were as broad as humanity, and no sufferer ever applied to him without enlisting them—his charities were only limited by his means, and he was a friend to all men.

In the death of Dr. Wilkins, this Association has lost a loyal member, who though prevented by long distance from taking part in its deliberations and proceedings as often as he otherwise would have done, yet he entered with hearty sympathy and deep interest into the work before it, and for those constituting its membership and engaged in this great specialty, he entertained the highest regard and most kindly feelings. In his death the State in which he lived and labored has lost a valuable citizen and a faithful steward of the great and important trust so long reposed in him. His immediate associates, who alone can correctly estimate the real worth and many virtues of the man, have lost a genial, courteous and kind friend; while to the thousands of helpless ones who have been committed to his care, he was as devoted as a kind father to his helpless children.

L. F. D.

ANDREW McFARLAND, M. D.

Dr. Andrew McFarland, of the Oak Lawn Retreat, near Oakland, Illinois, died in November, 1891, at the age of seventy-four. Dr. McFarland was born at Concord, N. H., in 1817. He was educated at Dartmouth College and at the Jefferson Medical College. He was Superintendent of the New Hampshire Asylum for the Insane from 1845 to 1854, and of the Central Hospital for the Insane at Jacksonville, Illinois, from 1854 to 1870, from which institution he resigned to establish the Retreat. He is said to have introduced, and always strongly advocated, the cottage system of hospital care for the insane.

T. S. ARMSTRONG, M. D.

It is our melancholy duty to record the death of Dr. G. S. Armstrong, Superintendent of the Binghamton State Hospital, Binghamton, N. Y., which occurred suddenly December 27, 1891, after a very short illness.

Dr. Armstrong was born May 11, 1825, in the town of Guilderland, Albany County, N. Y. His early life was passed in what were then the wilds of Tioga County, assisting his father in clearing land; and, later, in teaching school. He graduated from the Geneva Medical College in 1847. He pursued private practice for upwards of twenty years, during which time he was for six years president of the Board of Education of Owego, N. Y., and also held the office of coroner for several years. He had charge of the County Insane of Tioga County for thirteen years.

In 1880, he was appointed a trustee of the Binghamton Asylum for the Chronic Insane; and, shortly thereafter, was given charge of that institution, assuming the duties of superintendent in April, 1881.

The Binghamton Asylum had hitherto been the State Inebriate Asylum, and received its first patient as an insane asylum in October, 1881. At the time of Dr. Armstrong's death it had eleven hundred and forty patients.

Dr. Armstrong was a genial, large-hearted man, with a large circle of friends and acquaintances, who deeply deplore his untimely taking off. During the eleven years that he has

directed the affairs of the Binghamton State Hospital he has displayed marked capacity for administration and untiring zeal in the discharge of an important public trust. Those qualities of heart that endeared him to his associates and employes were kept in due subordination to his judgment and sense of duty, and fitted him well for the philanthropic work of asylum life. He died suddenly, practically "in the harness," of what appears to have been a cardiac neuralgia. He is survived by a widow, two sons and two daughters. Dr. J. F. Fitzgerald, assistant physician at the State Hospital, is his son-in-law.



OFFICIAL NOTICES.

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

At a Special Session of the State Commission in Lunacy held at the Capitol, in the City of Albany, on the seventeenth day of September, 1891.

Present—CARLOS F. MACDONALD, M. D., PRESIDENT, }
GOODWIN BROWN, } Commissioners.
HENRY A. REEVES, }

*In the matter of providing a uniform system of
financial books and accounts for the use of
State Hospitals.*

It having appeared from an examination of the financial books and accounts of the State Hospitals and from the statements of the financial officers of said institutions, that great diversity existed in the methods of keeping such accounts; and

It having appeared to the Commission after due consideration and after consultation with the State Comptroller, and upon his advice and approval that it would be desirable to unify said books and accounts to the end that intelligent investigation and comparison of said accounts of said Hospitals might be made; and

The Commission having been desirous of giving all proper parties an opportunity of being heard before taking action, and it having called a meeting of the Medical Superintendents and the financial officers of said institutions at the Capitol, in the City of Albany, for the purpose of giving said officers an opportunity of being heard and of proposing a uniform system of books and accounts, and said officers having been unable to agree and having referred the matter back to the Commission by resolution requesting it to prepare said forms and accounts; and

The Commission having examined existing methods and having sought the advice of State Hospital officials and of the State Comptroller, and having prepared forms of books and records which have received the approval of that official, it is hereby

ORDERED:

1. That the following forms of books and blank financial accounts in the State Hospitals for the Insane be and the same are hereby adopted, to take effect October 1st, 1891, unless otherwise ordered:

No.	Size of page.
1. Admission and Discharge Record for use of Steward.....	16 x 21
2. Patients' Board Journal.....	12 x 19
3. County Account.....	10 x 28
4. Invoice Book, (usual form).....	9½ x 15½
5. Voucher Journal.....	16 x 21

No.	Size of page.
6. Supply Ledger	16 x 21
7. (a.) General Fund Voucher. (To be accompanied by Treasurer's receipt to correspond).....	9½ x 10½
7. (b.) Special Fund Voucher. (To be printed in red and to be accompanied by architect's certificate and treasurer's receipt printed also in red).....	9½ x 10½
8. Classification of Accounts.....	16 x 21
9. Journal. (Usual form.)	
10. Cash Cook. (Usual form.)	
11. Ledger. (Usual form.)	
12. Trial Balance of Ledger.....	10 x 14
13. Officers' Pay-roll.....	10 x 14
14. Pay-roll, Permanent Employees	10 x 28
15. Pay-roll, Temporary Employees	10 x 14
16. Treasurer's Monthly Report to Auditing Committee.....	10 x 14
17. Treasurer's Quarterly Statement to the Board of Managers and Comptroller.....	10 x 28
18. Treasurer's Annual Statement to the Board of Managers and Comptroller.....	10 x 28
19. Monthly Statement Book. (Ruled same as No. 16.)	
20. Quarterly Statement Book. (Ruled same as No. 17.)	
21. Annual Statement Book. (Ruled same as No. 18.)	
22. Matron's Requisition Book	12½ x 21
23. Supervisor's Requisition Book.....	12½ x 21
24. Head Farmer's Journal.....	12½ x 21
25. Steward's Day Book.....	12½ x 21
26. Contract Book for Copies of Contracts Let by Managers.	
27. Report Book for Sub-Committees of Board for Managers. (Usual form.)	
28. Minute Book for Board of Managers. (Usual form.)	
29. Office Report to State Commission in Lunacy. (Quarterly.)	9½ x 12
30. Office Report to State Commission in Lunacy. (Annual.)...	9½ x 12
31. Abstract of Vouchers. (To accompany Treasurer's Quarterly Report to Comptroller)....	9½ x 14
32. Single Entry Ledger for Private Patients. (Usual form.)	

A circular letter explanatory of the above forms and sample sheets of the same with the exceptions of Nos. 4, 9, 10, 11, 26, 27 and 28, which are the usual forms of these records, and of Nos. 19, 20 and 21, which are sufficiently described above, will be furnished upon application to the Commission.

2. The preliminary order heretofore made and entered on the 10th of September, 1891, in the matter of unifying the financial accounts of the State Hospitals is hereby revoked.

By the Commission:

[L. S.]

T. E. McGAHER, *Secretary.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

At a Special Session of the State Commission in Lunacy, held at the Capitol, in the City of Albany, on the eighteenth day of November, 1891.

Present—CARLOS F. MACDONALD, M. D., PRESIDENT,
GOODWIN BROWN,
HENRY A. REEVES. } Commissioners.

In the Matter of the Admission of Voluntary Patients into Licensed Institutions for the Care, Custody or Treatment of the Insane, especially permitted to receive them as well as committed patients.

ORDERED:

1. That upon the admission of a Voluntary Patient to a licensed institution for the care, custody or treatment of the insane, permitted to receive voluntary as well as committed patients, a report be forwarded upon a printed blank, 8 x 10½ inches in size, in manner and form following, within ten days of the date of such admission:

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

NOTIFICATION OF ADMISSION OF VOLUNTARY PATIENT.

[Here insert title of Institution.]

.....N. Y.,.....189

To the State Commission in Lunacy:

Pursuant to direction, I hereby notify you of the admission as a voluntary patient into the above named institution of.....

Date of Admission,.....
Residence,.....
Age,.....
Nativity,
Occupation,.....
Education,.....
Civil Condition,.....
Form of Disease,.....
Rate per week,.....
Name and address of nearest relative or friend.....

.....
Physician in Charge.

2. This order shall be in effect on and after December 1st, 1891.

By the Commission:

(L. S.)

T. E. MCGARR, Secretary.

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

At a Special Session of the State Commission in Lunacy, held at the Capitol, in the City of Albany, on the eighteenth day of November, 1891.

Present—CARLOS F. MACDONALD, M. D., PRESIDENT,
GOODWIN BROWN,
HENRY A. REEVES, } Commissioners.

In the Matter of the Admission of Voluntary Patients into Licensed Institutions for the Care, Custody or Treatment of the Insane, especially permitted to receive them, as well as committed patients.

ORDERED:

1. That no voluntary patient shall be admitted into a licensed institution for the care, custody or treatment of the insane, permitted to receive voluntary as well as committed patients, except an application is made therefor in the following form, and all such institutions are required to prepare and furnish blanks for such applications:

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

.....
(Name of Institution.)

Application for Admission of Voluntary Patient.

I,, hereby request the Physician in Charge of the above named Institution to admit me as a voluntary patient. I hereby pledge myself to submit to the regulations thereof, to carry out, or aid in carrying out, all the directions which may be given for my treatment, and that my conduct will not be prejudicial to the good order and discipline of the Institution.

I do hereby declare that I am aware that the above named institution is licensed by the State Commission in Lunacy to care for and hold in custody insane patients; that the physician in charge has fully explained to me the character of the institution, and that I am at liberty to depart therefrom at my pleasure.

I hereby consent that the members of the State Commission in Lunacy may freely visit my apartments on any proper occasion, make such inquiries of me as they may deem necessary, and that I will make truthful answers thereto.

In witness whereof I have hereunto set my hand this.....day of189 , in the....., of....., county of..... and State of New York.

.....
(Signature of Applicant.)

We,, a resident of....., County of....., State of New York, and....., a resident of....., County of....., and State aforesaid, do severally certify and each for himself certifies as follows:

I am personally acquainted with the above named applicant for admission to the above named institution, and am not a committee of the person and estate nor a relative or guardian of said applicant, nor connected with said institution; I have read the foregoing application; I believe the statements therein made by the applicant to be true, and in my opinion the applicant is capable of forming a rational judgment as to the disposition of h person, and is capable of resisting undue influence.

.....Witness.

.....Witness.

2. This order shall be in effect on and after December 1, 1891.

By the Commission:

[L. S.]

T. E. MCGARR. *Secretary.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

At a Special Session of the State Commission in Lunacy, held at the Capitol, in the City of Albany, on the eighteenth day of November, 1891.

Present—CARLOS F. MACDONALD, M. D., PRESIDENT,
GOODWIN BROWN,
HENRY A. REEVES,

} *Commissioners.*

*In the Matter of the Employment of Physicians
in Licensed Institutions for the Care, Custody
or Treatment of the Insane, and the Admission
of Voluntary Patients in those Institutions
permitted to receive them as well as committed
patients.*

ORDERED:

1. That no license will hereafter be granted to operate and maintain an institution for the care, custody or treatment of the insane, unless such institution shall be constantly in charge of a well-educated resident physician (to be designated "Physician in Charge,") who shall possess the following qualifications:

He must be a graduate of a legally incorporated medical college and must have had at least five years' actual service as a physician in an institution for the care and treatment of the insane. In existing institutions this order will in all future appointments be held to apply.

2. That hereafter the approval of the Commission in writing will be required upon the appointment of all assistant physicians in licensed institutions for the care, custody or treatment of the insane. In existing institutions this order will in all future appointments be held to apply.

3. That no voluntary patient shall be admitted to a licensed institution for the care, custody or treatment of the insane permitted to receive voluntary as well as committed patients whose mind is so impaired as to render him incapable of forming a rational judgment as to the disposition of his person or whose will is so weak as to render him incapable of resisting undue

influence, nor unless an application for admission is made in the form prescribed by the Commission, by order dated November 18, 1891. A copy of the application, certified by the physician in charge, must accompany the report to the Commission of the admission of the patient.

By the Commission:

[L. S.]

T. E. MCGARR, *Secretary.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

At a Special Session of the State Commission in Lunacy, held at the Capitol, in the City of Albany, on the eighteenth day of November, 1891.

Present—CARLOS F. MACDONALD, M. D., PRESIDENT, }
GOODWIN BROWN, } *Commissioners.*
HENRY A. REEVES, }

*In the Matter of the Admission of Patients to
Institutions for the Care, Custody or Treat-
ment of the Insane.*

ORDERED:

1. That all persons committed to any institution for the care, custody or treatment of the insane must, at the time of admission, be informed by the receiving medical officer of the character of the institution and the cause of detention.

2. This order shall take effect December 1st, 1891.

By the Commission:

[L. S.]

T. E. MCGARR, *Secretary.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

STATE OF NEW YORK }
ATTORNEY GENERAL'S OFFICE. }
ALBANY, October 16, 1891. }

State Commission in Lunacy:

Your communication of the 12th instant has been received asking for my opinion upon the following question:

“What jurisdiction, if any, has the State Commission in Lunacy over homes, sanitariums or retreats in which are treated persons of unsound mind, other than those formally committed under the provisions of the statute as insane persons needing care and treatment in an institution for the care and treatment of the insane?”

It appears that there are numerous institutions in the State claimed by the proprietors to be institutions for the cure and treatment of persons suffering from opium habit, the alcohol habit, insomnia and various other forms of physical and mental disturbance, cases which, unquestionably, (although it is difficult to obtain proof in regard to the same,) are those which require

occasional and more or less long-continued restraint; and the question relates particularly to these institutions.

Section 12 of chapter 273 of the laws of 1890 prohibits a person or association from establishing or keeping an institution for the care, custody or treatment of the insane or persons of unsound mind for compensation or hire, without first obtaining a license therefor from the State Commission in Lunacy.

Section 1 of chapter 446 of the laws of 1874 prohibits the commitment to or confinement as a patient in any institution, home or retreat for the care and treatment of the insane except upon the certificate of two physicians under oath, setting forth the insanity of the person, and approved by the county judge or a judge of a court of record.

Section 13 of chapter 273 of the laws of 1890 provides that the State Commission in Lunacy may make an investigation in all cases where they have reason to believe that any person is wrongfully deprived of his liberty in any asylum or institution for the custody of the insane.

The terms "the insane," or "persons of unsound mind," as used in these statutes are, I think, practically synonymous.

Insanity is a question of fact and not of law; and whether a person is insane within the meaning of the term when used in these laws must depend upon the proofs.

"Persons suffering from the opium habit, the alcohol habit, insomnia and various other forms of physical and mental disturbance" are not necessarily insane as the term is here used.

Nor do I think that persons suffering from the temporary delirium of a fever, or an attack of hysteria would be regarded as insane under these statutes; although while the delirium or the attack lasted they might necessarily be subjected to physical restraint.

If, however, there is any institution in which any person actually insane within the legal signification of the term is confined or is under care or treatment, that institution would seem to be subject to the visitation of the State Commission in Lunacy whether the person had been sent there upon the certificate of two physicians approved by the judge or without such certificate.

Any such institution which keeps such an insane person without having a license from the State Commission in Lunacy would be violating the provisions of section 12 of chapter 273 of the laws of 1890.

Any such insane person kept at any such institution which is not licensed "is wrongfully deprived of his liberty;" and the State Commission may order an investigation under section 13.

Any such insane person who is kept at any such institution whether licensed or unlicensed without the certificate of the physicians and the approval of the judge required by chapter 446 of the laws of 1874, is also "wrongfully deprived of his liberty;" and the State Commission may investigate in such cases as provided in section 13 of the act of 1890.

Very respectfully, etc.,

CHAS. F. TABOR, *Attorney-General.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

ALBANY, December 5, 1891.

Hon. John Wanamaker, Postmaster General, Washington, D. C.

DEAR SIR—I forward herewith for your inspection an order recently issued by the State Commission in Lunacy regulating the matter of correspondence of the insane in the institutions of the State of New York. The Commission directs me to inquire as to what extent letters addressed to the insane in asylums may be scrutinized by the medical officer in charge of such inmates before delivery, to the end that their mental condition may not be injuriously affected by injudicious statements contained in letters of friends and relatives. The Commission desires to be informed whether there has ever been any United States statute or regulation of the Post Office Department upon this particular point, and, if not, whether the superintendents of asylums are justified, not only in examining letters addressed to their charges, but also in cases where it would be manifestly injurious for the patients to receive such letters, in withholding them until such time as recovery takes place. Cases have come under the observation of the Commission where narcotic drugs have been enclosed in letters to patients; where plans for the escape of dangerous lunatics have been suggested in said letters, etc., etc. Business and professional men, who by reason of overwork and anxiety have fallen victims to insanity necessitating their confinement in asylums, should certainly in the opinion of the Commission, be spared the infliction of letters written by thoughtless correspondents pertaining to business complications or domestic misfortunes.

In case no regulation has been made by the department, the Commission would be under many obligations for advice with regard to this matter.

I am, very respectfully yours,

T. E. McGARR, *Secretary.*

POST OFFICE DEPARTMENT,
OFFICE OF THE

FIRST ASSISTANT POSTMASTER GENERAL, WASHINGTON, D. C.

SIR—The Postmaster General has handed me your letter of December 5th, submitting an order issued by the State Commission in Lunacy regulating the matter of correspondence of the insane in the institutions of the State of New York.

You have been directed by the Commission to inquire whether there has ever been any United States statute upon the question of delivery of mail addressed to the insane; and whether Superintendents of Asylums are justified, not only in examining letters addressed to their charges, but also in cases where it would be manifestly injurious for the patients to receive such letters, to withhold them until such time as recovery takes place.

Answering your inquiry, I beg to inform you that there is no United States statute expressly applying to the delivery of mail addressed to the insane.

The Statute forbidding unauthorized persons to open letters addressed to others, is as follows:

“Any person who shall take any letter, postal card, or packet, although it

does not contain any article of value or evidence thereof, out of a post office or branch post office, or from a letter or mail carrier, or which has been in any post office or branch post office, or in the custody of any letter or mail carrier before it has been delivered to the person to whom it was directed, with a design to obstruct the correspondence, or to pry into the business or secrets of another, or shall secrete, embezzle, or destroy the same, shall, for every such offense, be punishable by a fine of not more than five hundred dollars, or be imprisoned at hard labor for not more than one year, or by both." (R. S., 3892.)

It is the intention and desire of the Post Office Department to impress upon every one the importance of preserving the absolute sanctity of the seal, hence, I am inclined to think that the question of *legality* of the acts of your Superintendents in opening and withholding letters addressed to the insane patients, placed by due legal process, in their charge, is one for the consideration of your Counsel. The jurisdiction of the Department ceases when the letter is delivered in accordance with its address, order of the addressee, or to his legal guardian; the question of delivery is the only one that can properly come before this office.

Very respectfully,

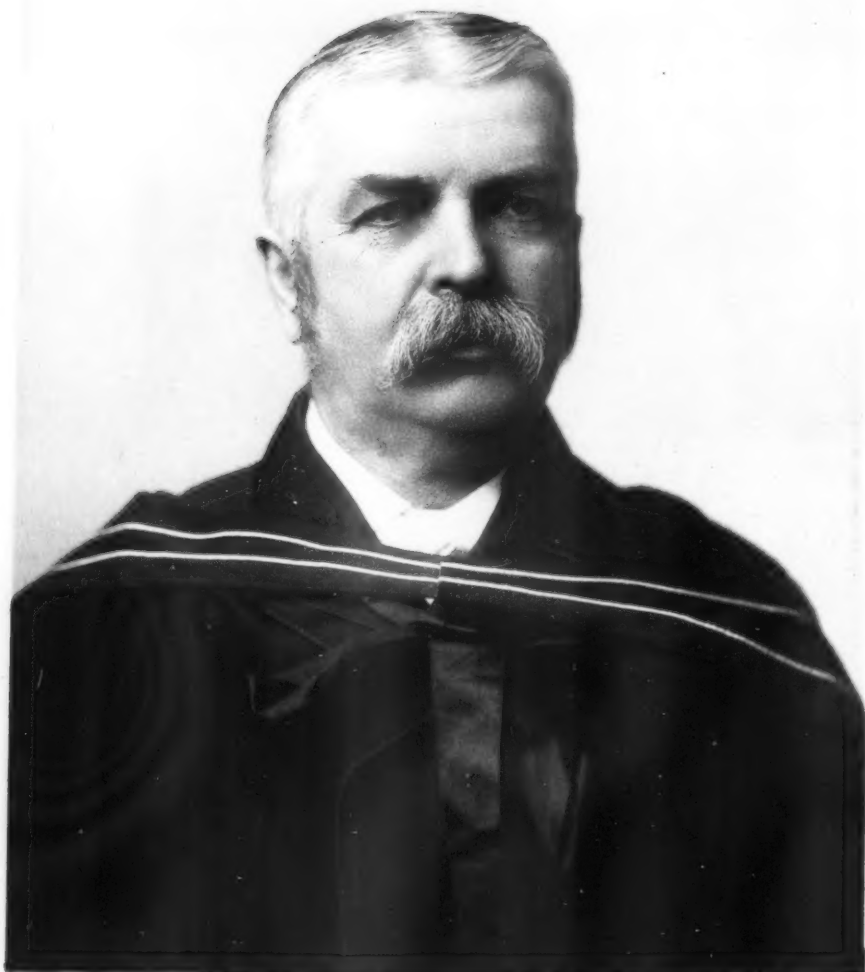
S. A. WHITFIELD,

First Assistant Postmaster General.

HON. T. E. MCGARR,

Secretary State Commission in Lunacy,

Albany, N. Y.



American Journal of Insanity, Utica, N. Y., April, 1892.

N. Y. Photogravure Co.

*James L. King
Secy. Fla.*